AC/DC PORTABLE
STEREO CASSETTE-RECORDER 3-BAND RADIO

MODEL CRS-4003S

SERVICE DATA

JAN./1978

SUPERSCOPE®
BY marantz®

SUPERSCOPE INC.
20525 NORDHOFF STREET CHATSWORTH,
CALIFORNIA 91311·U.S.A.

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1. TECHNICAL SPECIFICATIONS

GENERAL

Dimensions	481 mm x 248 mm x 150 mm (19″ x 9-3/4″ x 5-7/8″)
Weight	7.4 kg (16 lbs 5 oz) with Batteries
Power Requirements	AC 110 ~ 130V/220 ~ 240V 50/60 Hz, 15 Watts 8 "D" Size Batteries 2 RBD-1 Rechargeable Battery Packs External 12 V DC
Semiconductor Complement	
Transistors	34
FET's	2
Diodes	31
IC's	3
Terminals	
Microphone Input x 2	Plug Type: Mini Input Sensitivity: less than 0.32 mV (–70 dBV) Input Impedance: 5.2 kΩ
Line Input x 2	Plug Type: Pin Input Sensitivity: less than 100 mV (–20 dBV) Input Impedance: 100 kΩ
Line Output x 2	Plug Type: Pin Output Level: 0.775 V (0 VU) ±3 dB Output Impedance: 7 kΩ
DIN (Play/Rec) Jack x 1	Plug Type: DIN Input Sensitivity: less than 30mV (–30 dB) Input Impedance: 47 kΩ Output Sensitivity: 0.5V ± 3 dB Output Impedance: 10 kΩ
External Speaker x 2	Plug Type: Mini Output Power: 2.0 Watts x 2 (6 Ω, better than EIA DC)
Phono Input x 2	Plug Type: Mini Input Sensitivity: less than 6 mV (–44 dBV) Input Impedance: 25 kΩ
FM External Antenna x 1	Input Impedance: 75 Ω
Stereo Headphone x 1	Plug Type: Phone Impedance: 8 Ω
AC Inlet x 1	
DC 12 V x 1	
Remote Control x 1	

TAPE RECORDER SECTION

Tape	Philips Type Cassette Tape
Recording System	4-Track System, AC Bias
Erasing System	AC Erase
Rewind and Fast Forward Time	90 sec./C-60
Power Output	2.0 W x 2 (DC)
R/P Frequency Response	
Normal	50 Hz +4, –8 dB/9 kHz +6, –5 dB
CrO_2/Fe-Cr	50 Hz +3, –10 dB/9 kHz +5, –6 dB
Signal-to-Noise Ratio	45 dB
Tape Speed	1-7/8 ips. (4.8 cm/sec.) ±3%
Wow and Flutter	less than 0.25% rms (NAB WTD)

TUNER SECTION

Circuit System	3-Band FM/MW/SW, Superheterodyne
Frequency Range	FM: 88 to 108 MHz MW: 525 to 1605 kHz SW: 6 to 18 MHz
Intermediate Frequency	FM: 10.7 MHz MW/SW: 455 kHz
Antenna	FM: Telescopic Monopole MW/SW: Ferrite Bar
Sensitivity	FM: less than 7 μV (30 dB S/N) MW: less than 500 μV/m (20 dB S/N)
Signal-to-Noise Ratio	FM: better than 54 dB (1 mV Input) MW: better than 42 dB (5 mV/m Input)
FM Stereo Separation	better than 28 dB (1 mV Input)

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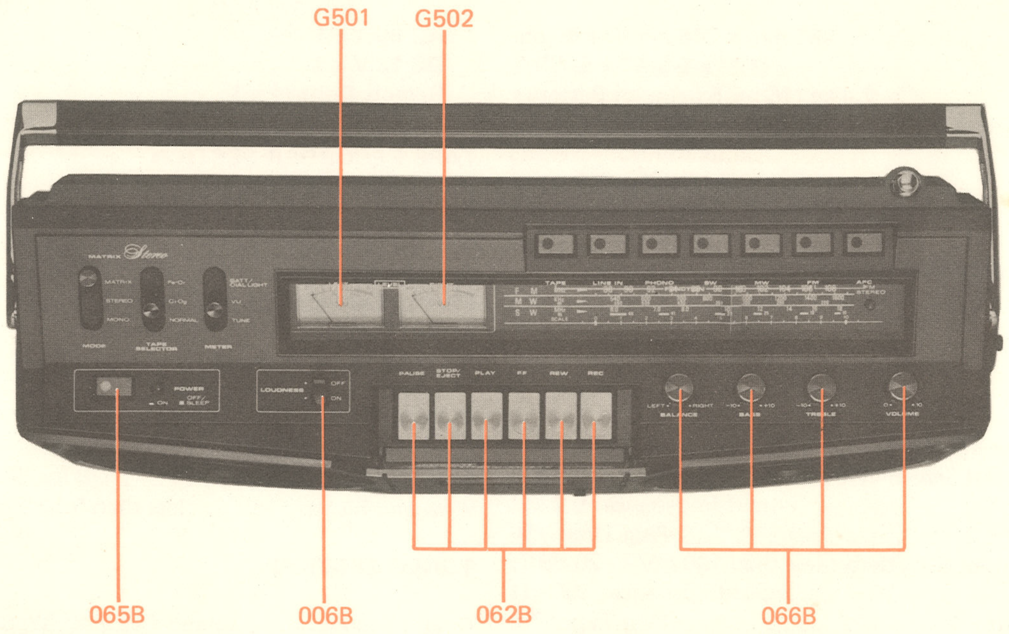
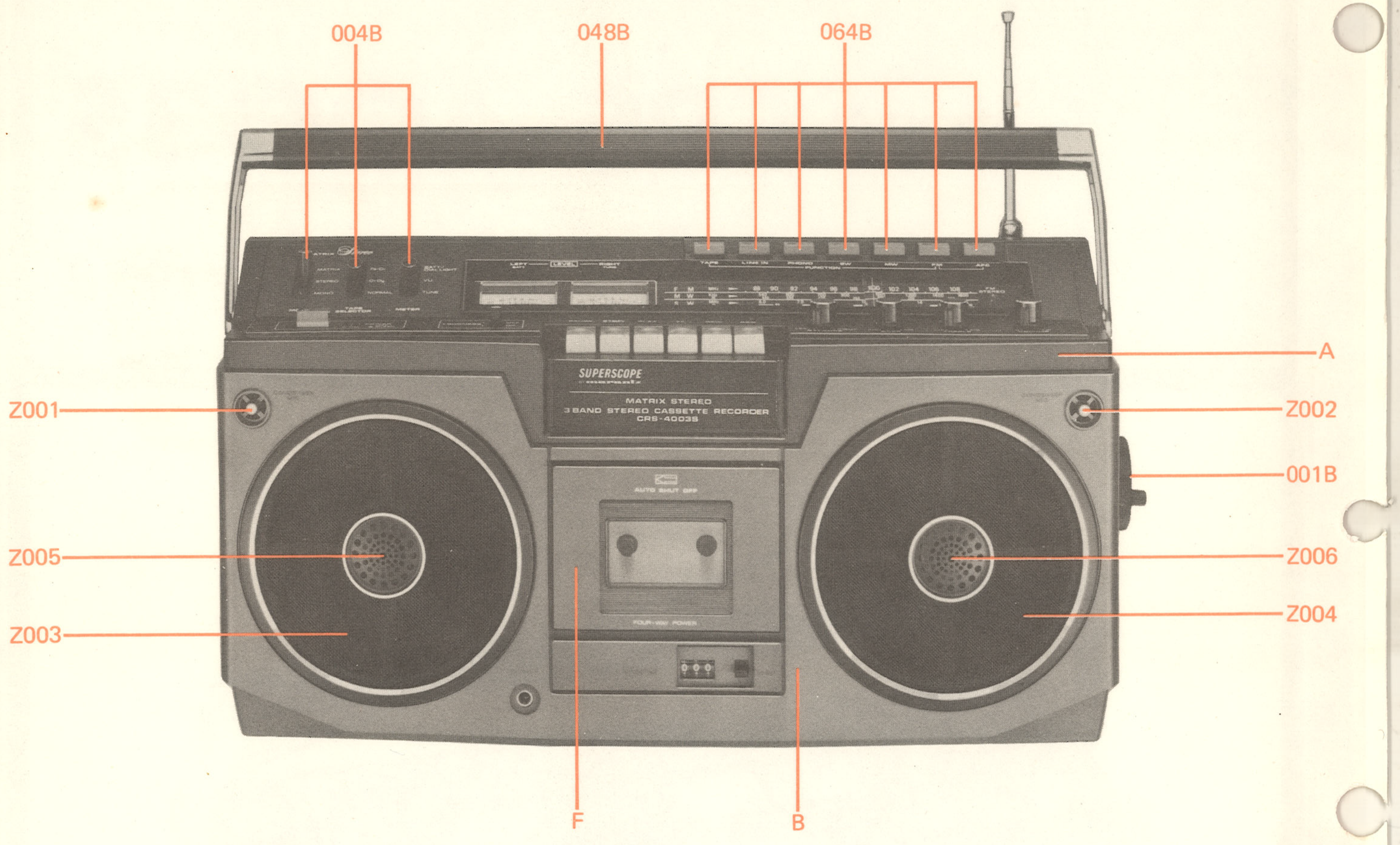
2. MAJOR COMMPONENT LOCATIONS

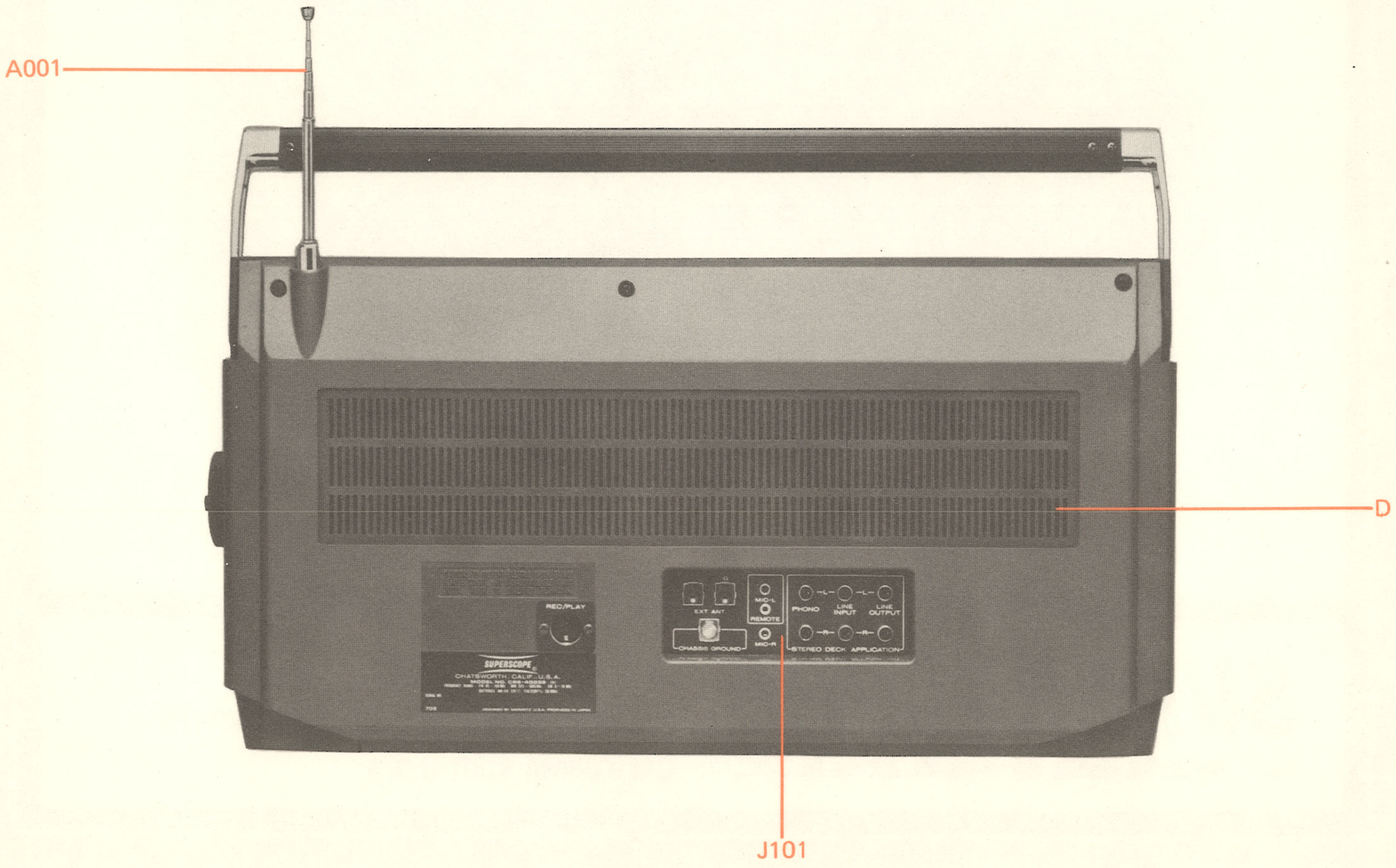
2.1 CABINET - TOP VIEW


G501
G502
065B
006B
062B
066B

2.2 CABINET - FRONT VIEW

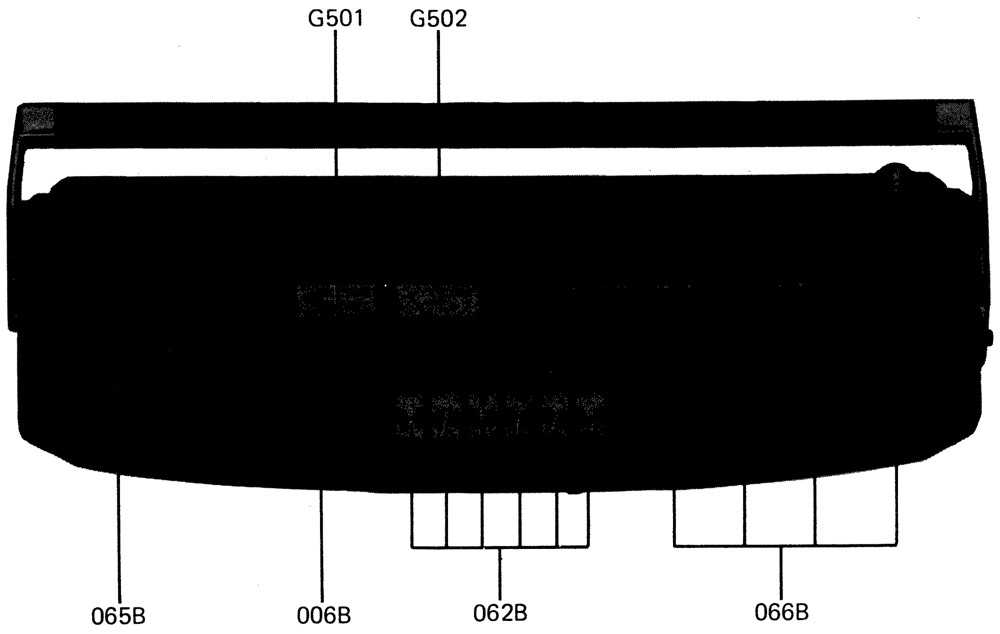

004B
048B
064B
A
Z001
Z002
001B
Z005
Z006
Z003
Z004
F
B

2.3 CABINET - REAR VIEW

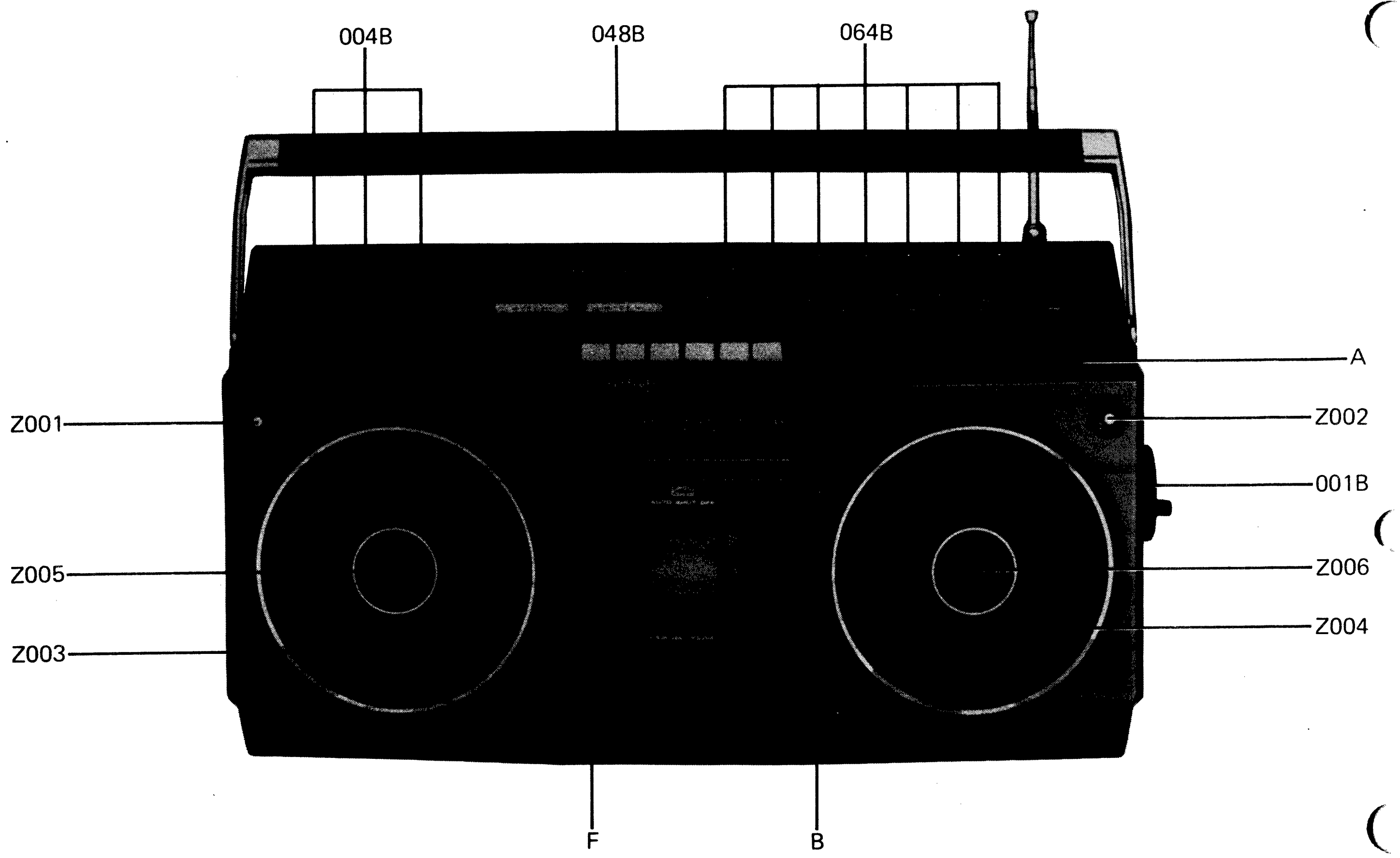


2. MAJOR COMMPONENT LOCATIONS

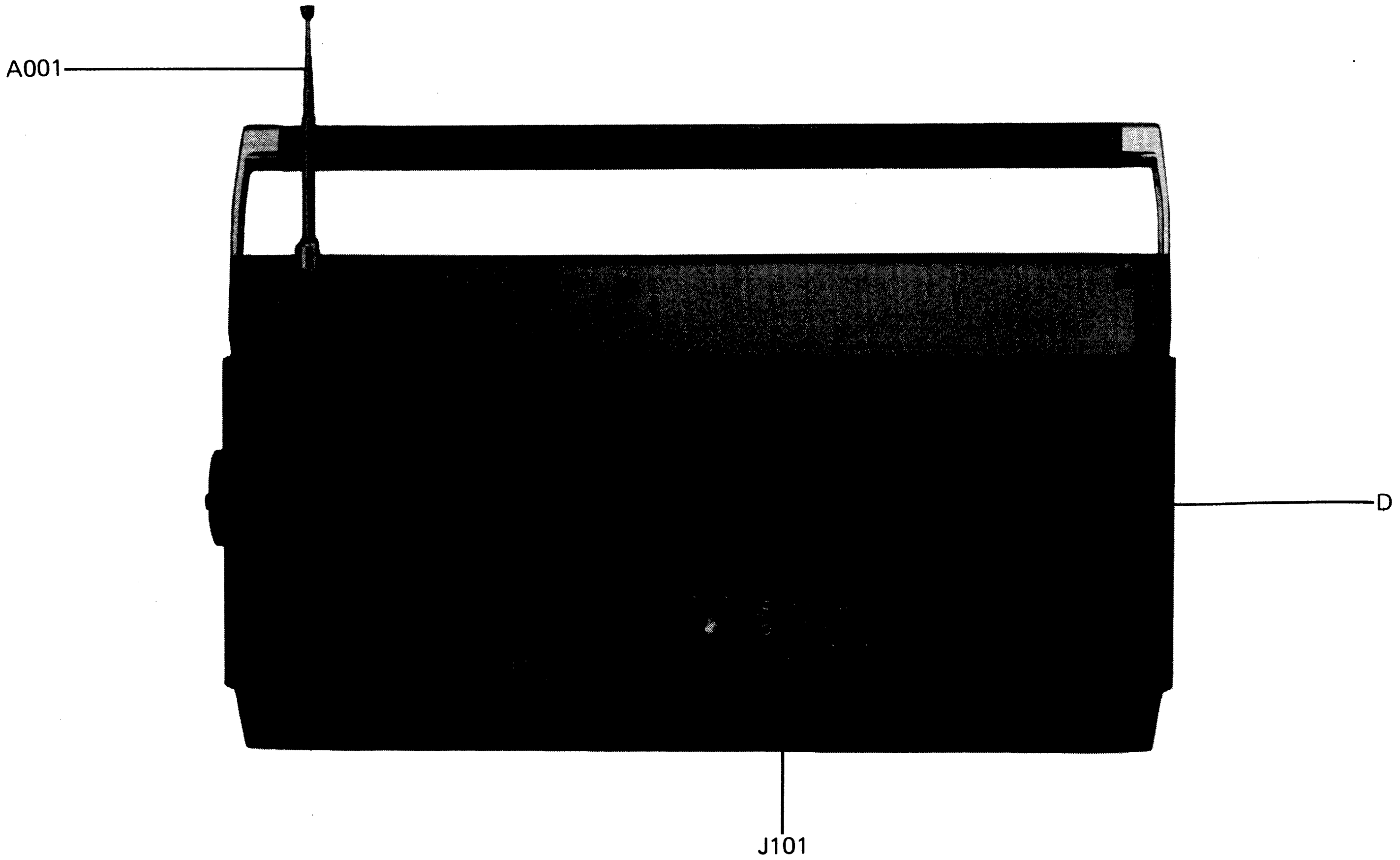
2.1 CABINET - TOP VIEW


G501
G502
065B
006B
062B
066B

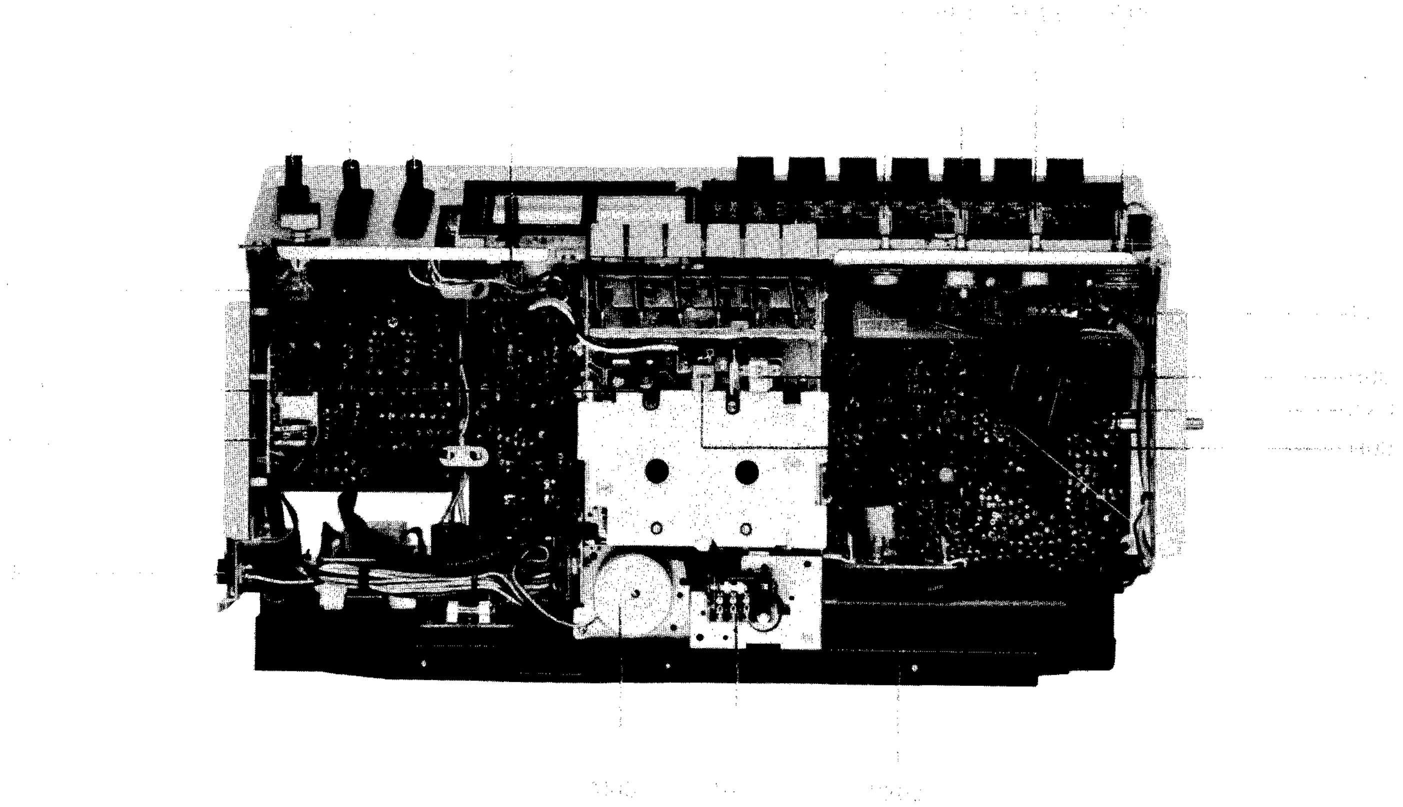
2.2 CABINET - FRONT VIEW


004B
048B
064B
A
Z001
Z002
001B
Z005
Z006
Z003
Z004
F
B

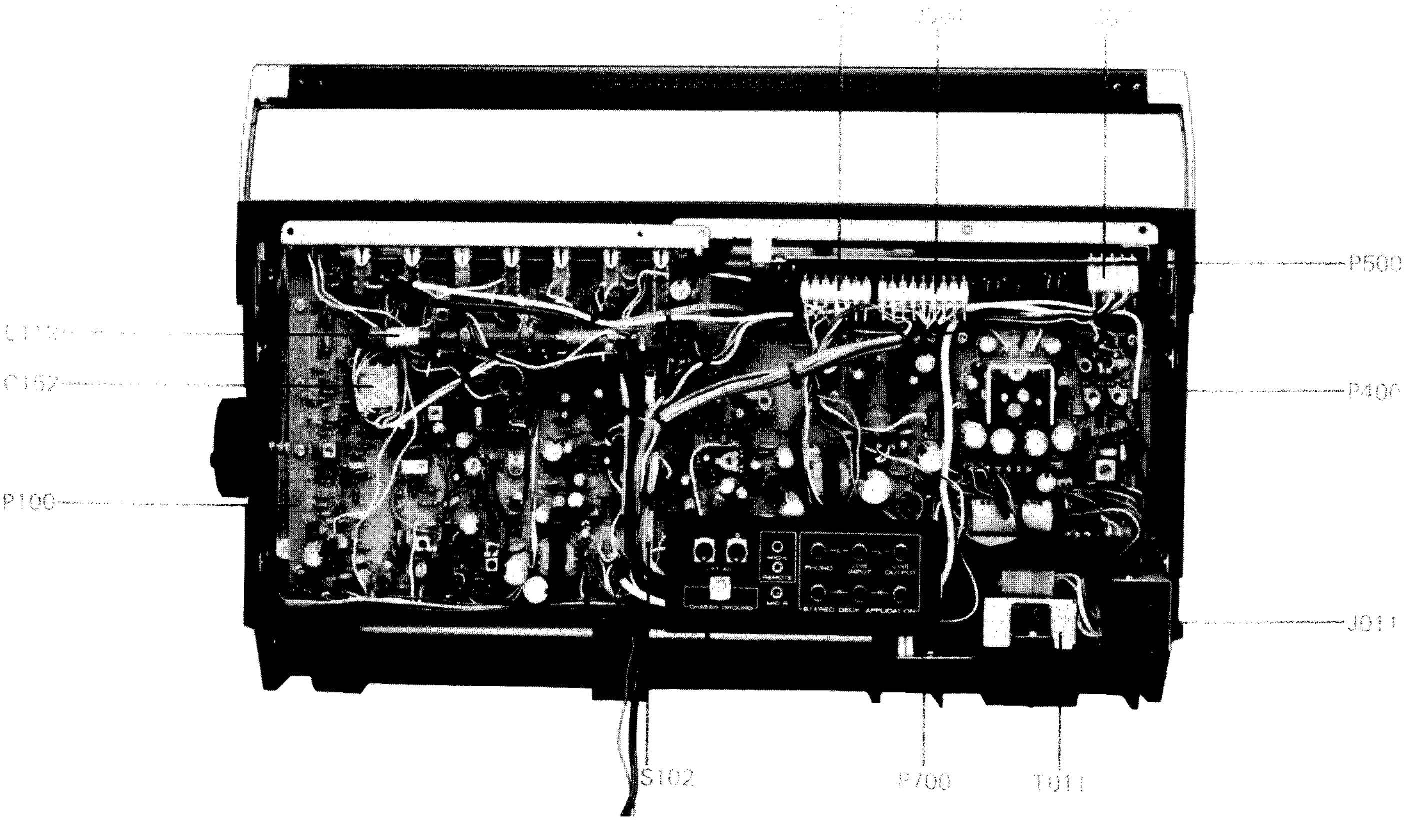
2.3 CABINET - REAR VIEW



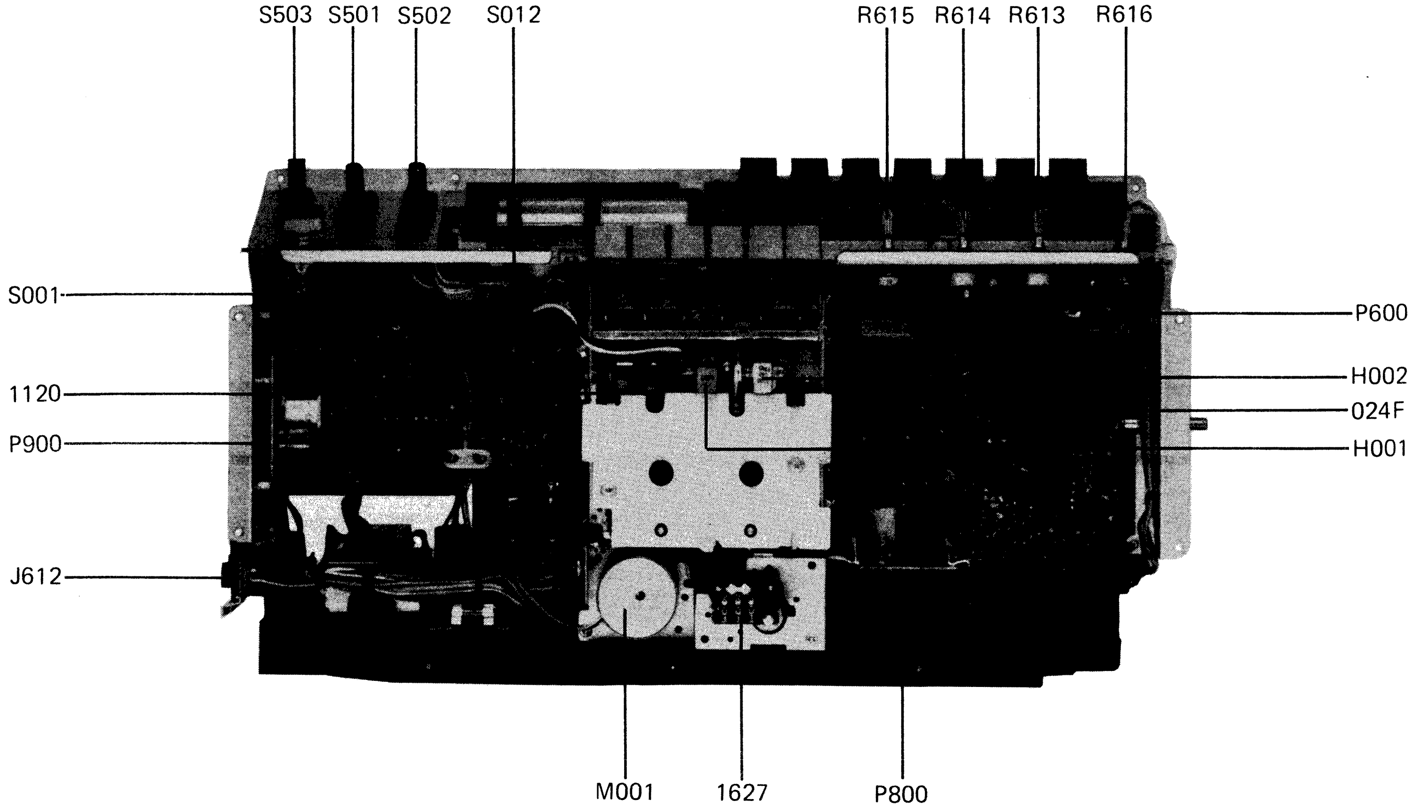
2.4 CHASSIS - FRONT VIEW



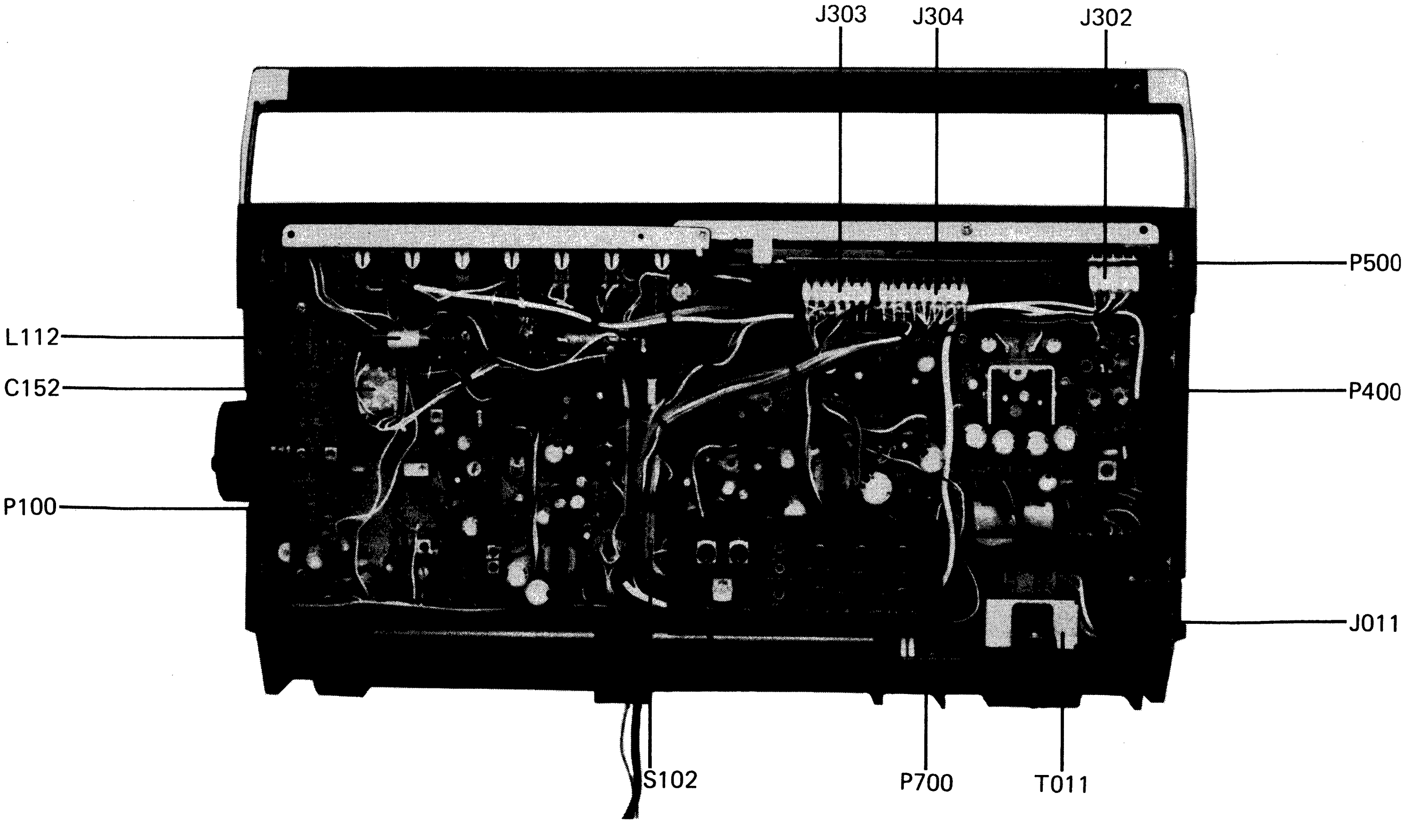
2.5 CHASSIS - REAR VIEW


P500
C152
P400
P100
J011
S102
P700
T011

2.4 CHASSIS - FRONT VIEW

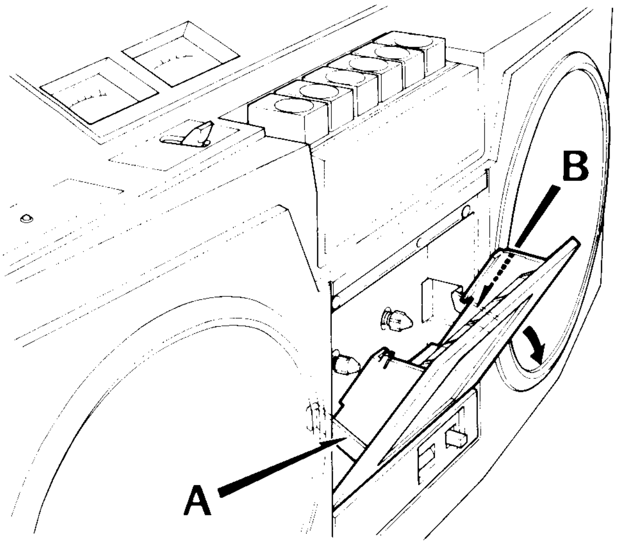

S503
S501
S502
S012
R615
R614
R613
R616
S001
1120
P900
J612
P600
H002
024F
H001
M001
1627
P800

2.5 CHASSIS - REAR VIEW

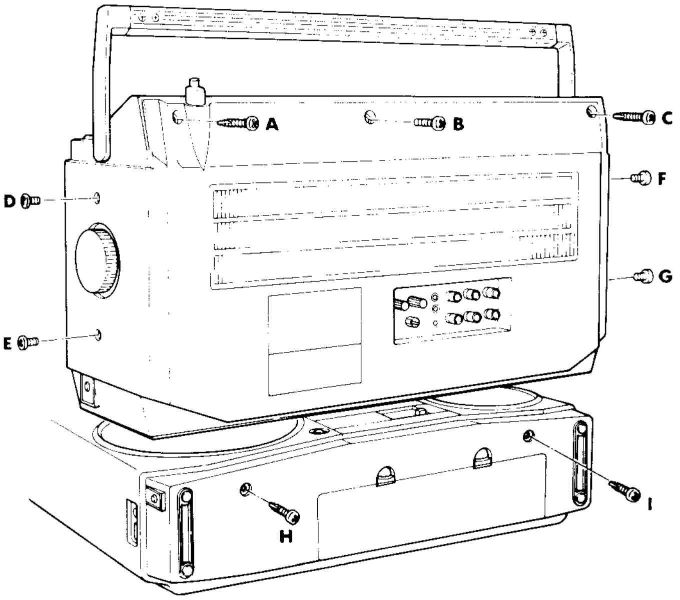

J303
J304
J302
L112
C152
P100
P500
P400
J011
S102
P700
T011

3. REMOVING PROCEDURES

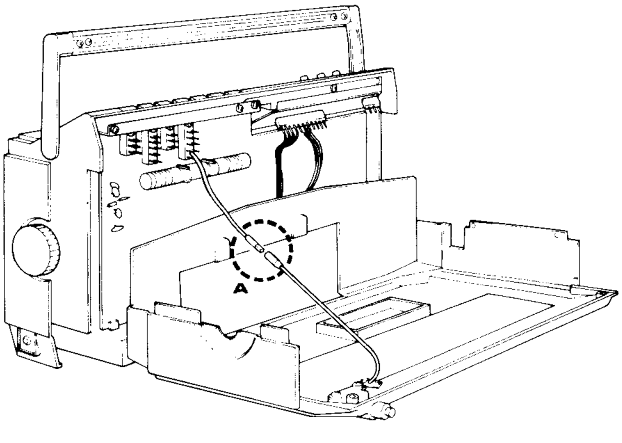
1. **Removing the cassette escutcheon**
   While pressing the points A and B in the arrow direction, pull the escutcheon toward you as shown. The escutcheon will be removed.



2. **Removing the back cover**
   a. Remove the three screws A through C on the back, four screws D through G on both sides, and two screws H and I on the bottom.



   b. Then, disconnect the antenna connector A, and the back cover will come off the casing.



3. Removing the chassis

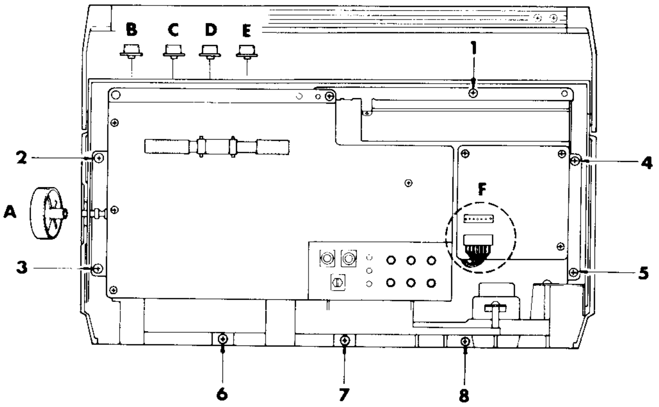
a. Remove the five knobs A through E.
   A – TUNING
   B – VOLUME
   C – TREBLE
   D – BASS
   E – BALANCE

b. Remove the eight screws 1 through 8.

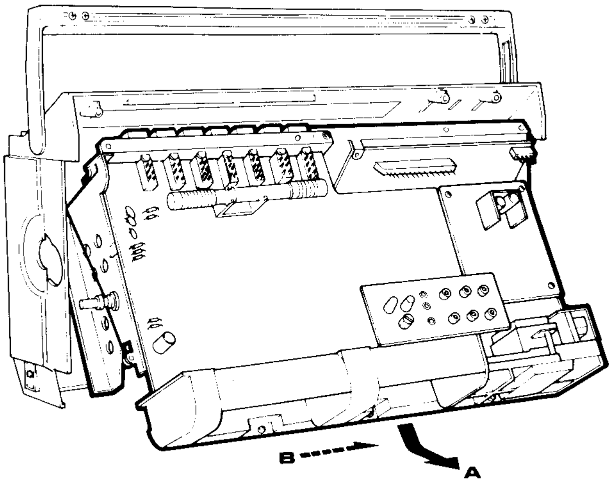
c. Disconnect the connector F.

d. Set the switches as:

Switch	**Position**
LOUDNESS	OFF
MODE	STEREO
TAPE SELECTOR	CrO_2
METER	VU

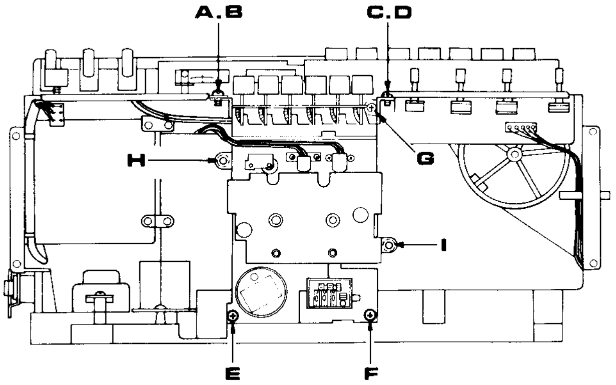


e. Make certain that the cassette escutcheon, knobs, screws and cord are removed and the LOUDNESS, MODE, TAPE SELECTOR and METER switches are in positions as specified above. Bring out the lower part of the chassis in the arrow A direction as shown. Draw it toward the arrow B direction.



4. Removing the mechanical assembly

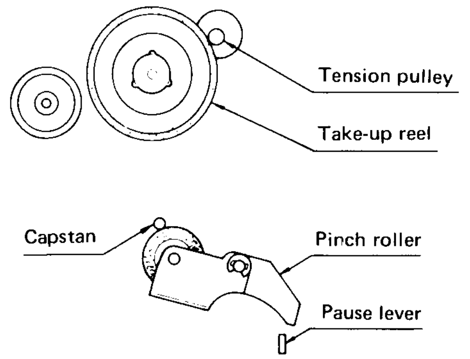
Remove the four top screws A through D, two front screws E and F, and the three back screws G through I. Draw the mechanical assembly out by pulling toward you from the front. Be careful not to break the lead wires connected to the heads.



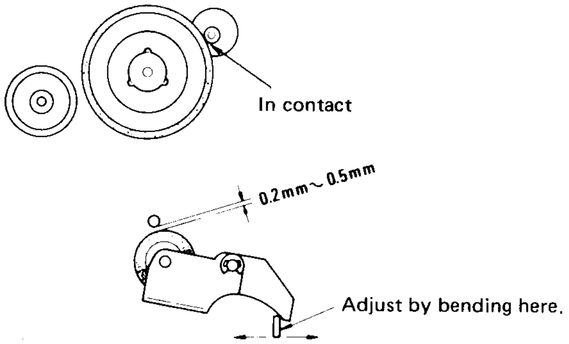
4. MECHANICAL ADJUSTMENTS

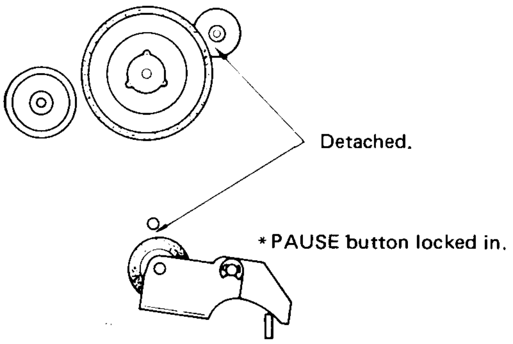
1. Adjusting the pause timing

Set the recorder in the playback mode. Press the PAUSE button in. Bend the pause lever with a long-nose pliers until the pinch roller detaches from the capstan before the tension pulley detaches from the take-up reel.


Tension pulley
Take-up reel
Capstan
Pinch roller
Pause lever

* In playback mode

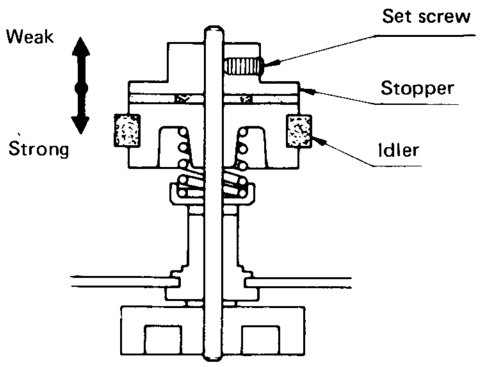

In contact
0.2mm～0.5mm
Adjust by bending here.



* PAUSE button locked in.

2. Measuring the fast forward and rewind torques

Use a torque meter to measure the fast forward and rewind torques. If each result does not fall under the standards listed below, loosen the set screw and move the stopper up and down for proper torque as shown.
Standards: Fast forward torque = 90 g·cm, Rewind torque = 80 g·cm


Weak
Strong
Set screw
Stopper
Idler

3. Measuring of play, FF. And Rewind torque-in Play/FF/Rew Mode.

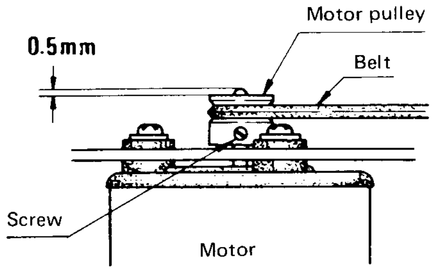
Measure the torques with a torque meter to confirm that the torque satisfies the specified value in each mode.

Specifications

Play	40 to 70g·cm
FF	60 to 110g·cm
Rew	60 to 110g·cm

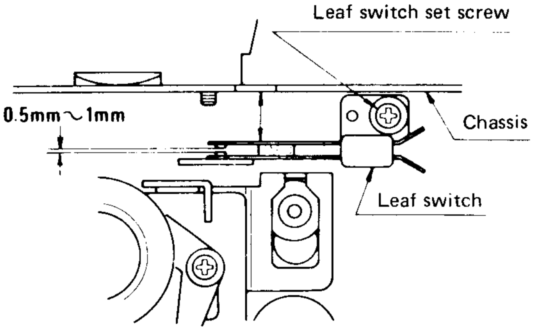
4. Positioning the motor pulley

Loosening the set screw. Adjust it until the clearance between the motor shaft top and motor pulley top is 0.5 mm.


Motor pulley
0.5mm
Belt
Screw
Motor

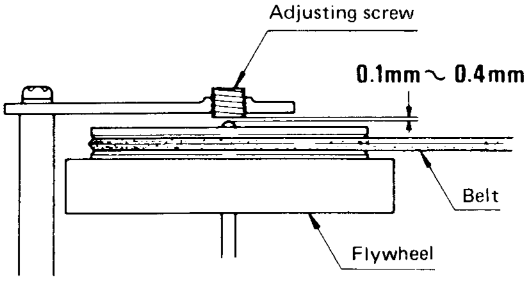
6. Positioning the leaf switch

Fit the leaf switch so that it is made parallel with the chassis when the recorder is at rest.


Leaf switch set screw
0.5mm∿1mm
Chassis
Leaf switch

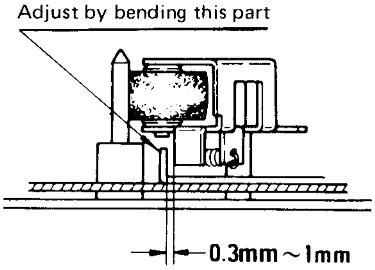
5. Adjusting the flywheel thrust

Turn the adjusting screw until the clearance between the adjusting screw and thrust shaft end of flywheel is 0.1 to 0.4 mm. After adjustment, be sure to paint the adjusting screw to lock.


Adjusting screw
0.1mm∿ 0.4mm
Belt
Flywheel

7. Positioning the pinch roller

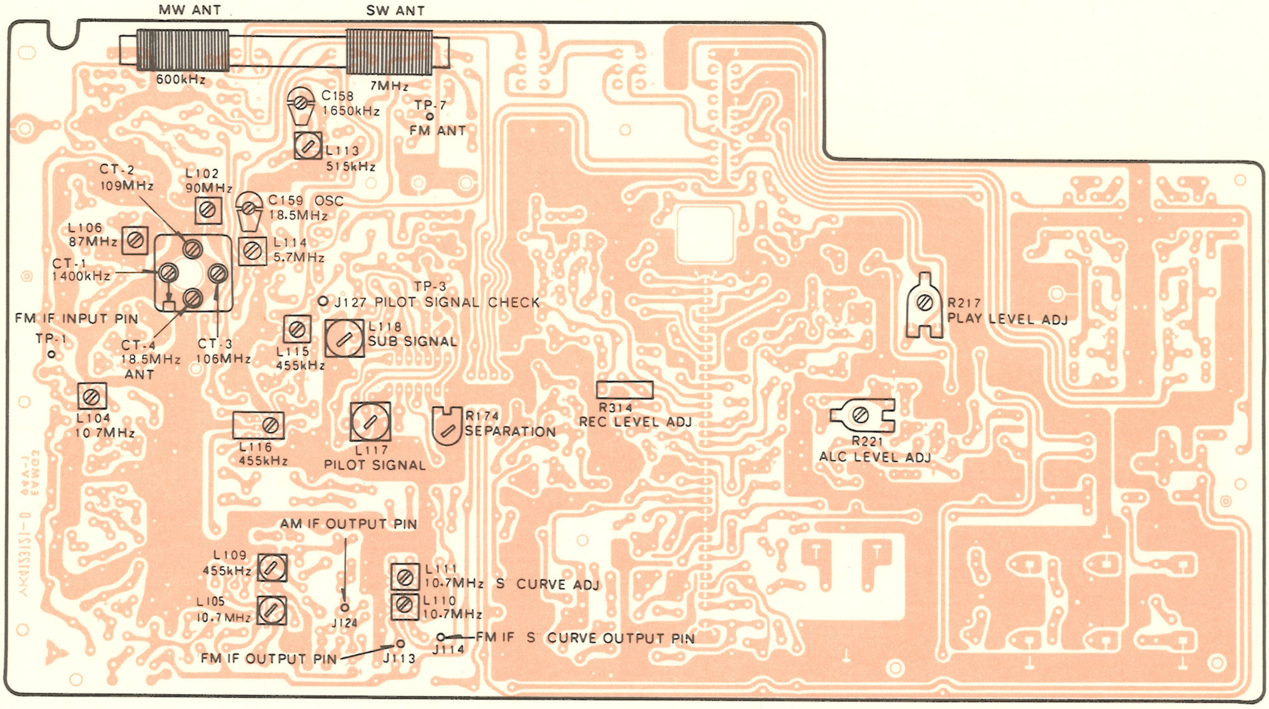
Set the recorder in the playback mode. Adjust the position of the pinch roller as shown.

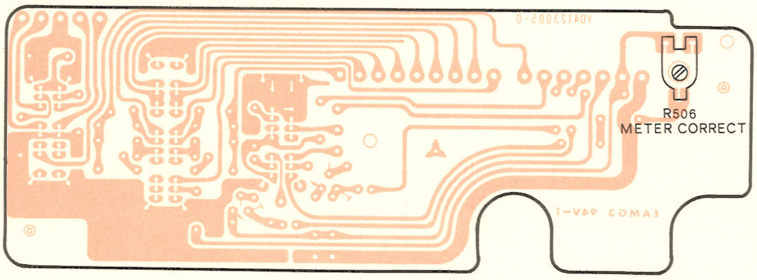

Adjust by bending this part
0.3mm∼1mm

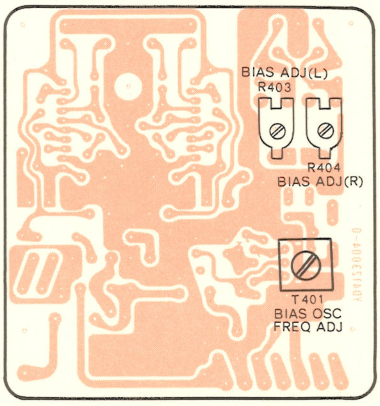
5. ELECTRICAL ADJUSTMENTS AND MEASUREMENTS

Precaution for Adjustment and Measurement

1. Whenever adjusting or measuring any circuit, wipe the heads clean with a soft cloth moistened with alcohol or carbon tetrachloride. Also be sure to demagnetize the heads, capstan, and similar parts.
2. The voltage at any electrical point may vary with the input signal, so make measurements of voltage under no signal condition.
3. Transistors are affected by microvoltage. Whenever measuring on them, use a VTVM having a high internal resistance and high input sensitivity enough to eliminate errors in measurement.
4. In adjustment or measurement, set the TONE control to its mechanical center ("0") unless otherwise specified.
5. For measurements of outputs, connect a pure 6 Ω resistor across the external speaker terminal and use a VTVM. Unless otherwise specified, adjust the VOLUME control for the standard output level, 100 mW (0.775 V/6 Ω).

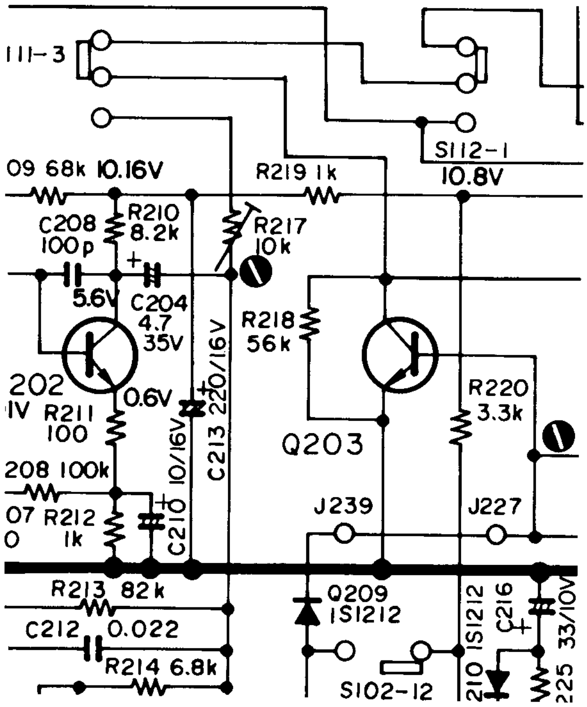

MW ANT
SW ANT
600kHz
7MHz
C158
1650kHz
TP-7
FM ANT
L113
515kHz
CT-2
109MHz
L102
90MHz
C159 OSC
18.5MHz
L106
87MHz
L114
5.7MHz
CT-1
1400kHz
TP-3
J127 PILOT SIGNAL CHECK
FM IF INPUT PIN
TP-1
CT-4
18.5MHz
ANT
CT-3
106MHz
L115
455kHz
L118
SUB SIGNAL
R217
PLAY LEVEL ADJ
L104
10.7MHz
L116
455kHz
L117
PILOT SIGNAL
R174
SEPARATION
R314
REC LEVEL ADJ
R221
ALC LEVEL ADJ
AM IF OUTPUT PIN
L109
455kHz
L105
10.7MHz
J124
L111
10.7MHz "S" CURVE ADJ
L110
10.7MHz
FM IF "S" CURVE OUTPUT PIN
J114
FM IF OUTPUT PIN
J113


R506
METER CORRECT


BIAS ADJ(L)
R403
R404
BIAS ADJ(R)
T401
BIAS OSC
FREQ ADJ

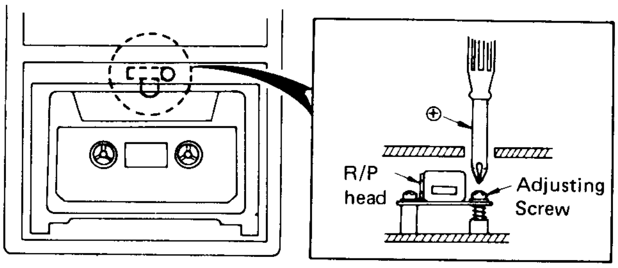
1. Adjusting the playback level

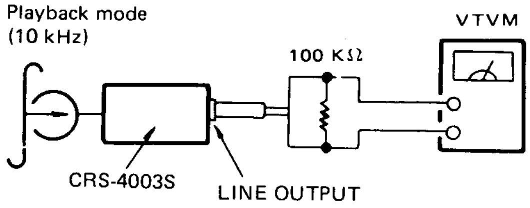
Play the 333 Hz level adjusting tape MTT 112 back and inspect the R and L channel output voltages at the LINE OUTPUT jack. Adjust R217 until the output voltage of the R channel coincides with that of the L channel. The output voltage at LINE OUTPUT jack will be around 0.95 V.


I11-3
S112-1
10.8V
R219 1k
09 68k 10.16V
C208 100p
R210 8.2k
R217 10k
5.6V
C204 4.7 35V
202
IV
R211 100
0.6V
C213 220/16V
C210 10/16V
R218 56k
Q203
R220 3.3k
208 100k
07 R212 1k
0
J239
J227
R213 82k
C212 0.022
R214 6.8k
Q209 1S1212
S102-12
210 1S1212
C216
225 33/10V

2. Adjusting the head azimuth

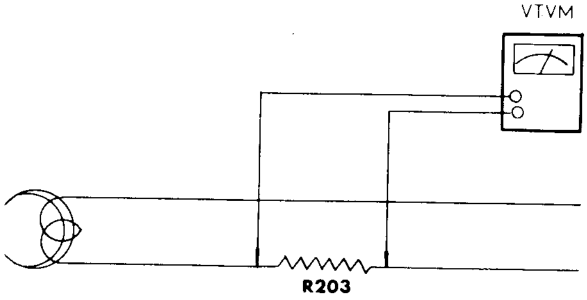
Connect a VTVM across the LINE OUTPUT jack. Play the 10 kHz signal of the test tape back. Turn the adjusting screw until the output voltage is maximum. If the maximum voltages of the both channels are different, adjust the across to a point at which the output levels of both channels are identical. After adjustment, be sure to paint the adjusting screws to lock.

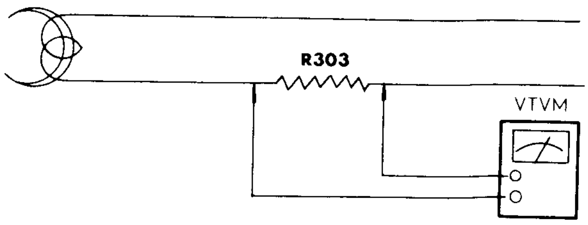

⊕
R/P head
Adjusting Screw


Playback mode (10 kHz)
VTVM
100 KΩ
CRS-4003S
LINE OUTPUT

3. Adjusting the bias current

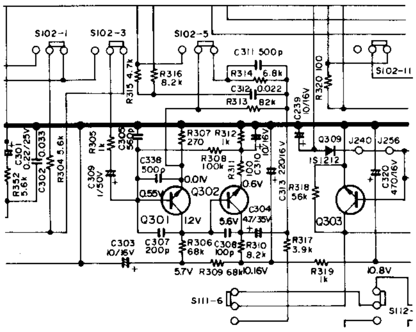
Set the power voltage to 12 V and set the TAPE SELECTOR switch to NORMAL. Set the recorder in the recording mode. Adjust the semifixed resistors R403 and R404 until the voltages across R203 and R303 are 6.0 mV. The bias current will increase by turning the semifixed resistors R403 and R404 counter-clockwise as locking toward part arrangement.





4. Adjusting the recording level

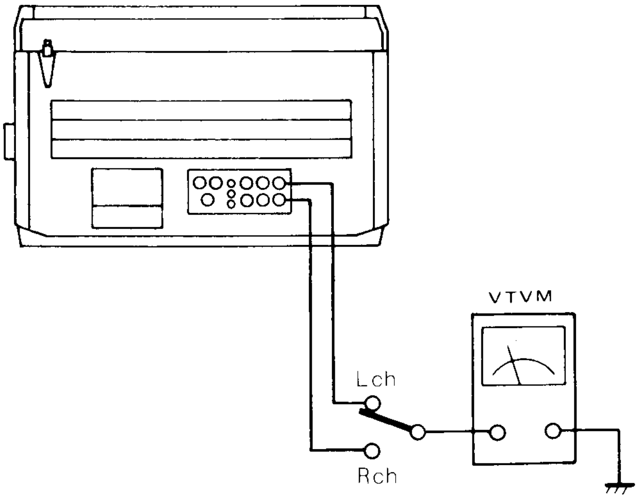
Set the recorder in the recording mode. Connect a 1 kHz, −77 dBV signal to both R and L external mic jacks. Adjust R314 until both output voltages at the LINE OUTPUT jacks are identical. In turn, increase the mic input signal level up to −50 dB. Adjust R221 until both output voltages at the LINE OUTPUT jacks are identical. Note that since the ARL circuit has a time constant, each output voltage will not immediately follow up the variation of R221. So take your time in this measurement. Finally, speak toward the built-in condenser mic and make certain that the two VU meter pointers swing similarly around −10 VU. If there is a great difference between the two deflections, connect a −77 dBV signal to the external mic jacks and adjust R314 until the level difference at the LINE OUTPUT jacks is within 3 dB, thereby minimizing the difference between the two channel recording amplifications.

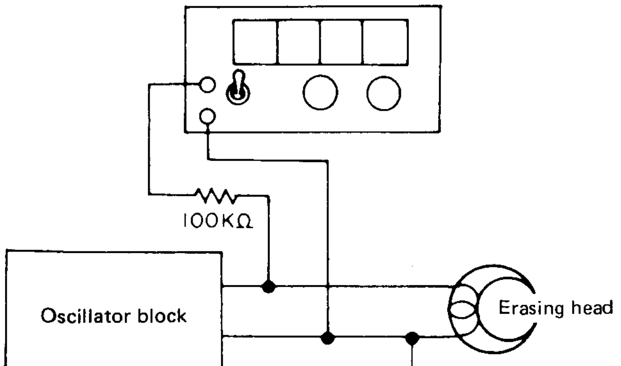

S102-1
S102-3
S102-5
S102-11
C311 500p
R314 6.8k
R316 8.2k
R315 4.7k
C312 0.022
R313 82k
R320 100
C239 10/16V
R352 5.6k
C301 0.22/25V
C302 0.033
R304 5.6k
R305 1k
C305 560p
C309 1/50V
R307 270
R312 1k
R308 100k
C338 500p
0.01V
0.55V
Q301
Q302
R311 100
C310 10/16V
0.6V
C313 220/16V
C304 47/35V
12V
5.6V
C303 10/16V
C307 200p
R306 68k
C308 100p
R310 8.2k
5.7V
R309 68k
10.16V
R317 3.9k
R318 56k
Q309
1S1212
J240
J256
Q303
C320 470/16V
R319 1k
10.8V
S111-6
S112-

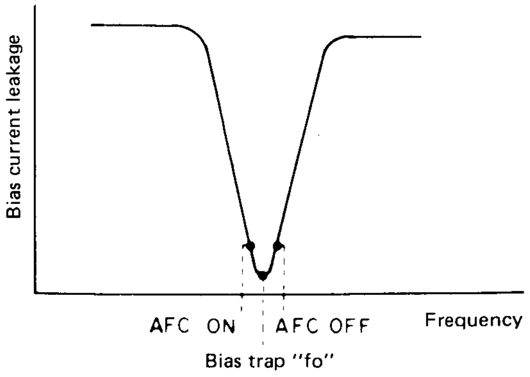
5. Adjusting the bias oscillation frequency

(1) Connect a 100 kΩ resistor and a frequency counter to the erasing head as shown. Turn the AFC switch "on". Adjust T401 until the oscillation frequency is 80 kHz. Turning the AFC switch "off" will change the oscillation frequency to around 82.5 kHz.

(2) In turn, connect a VTVM to the LINE OUTPUT jacks. Measure the bias current leakage. The bias trap center frequency "fo" is designed around 81 kHz. Adjust T401 until the bias current leakage provides the same output levels around the center frequency when the AFC switch is turned on and off.

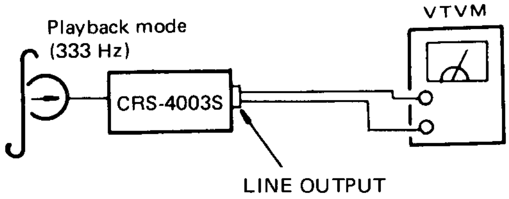

VTVM
Lch
Rch

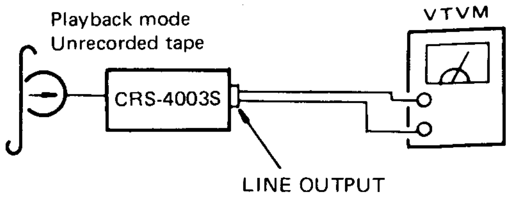

100KΩ
Oscillator block
Erasing head
H002



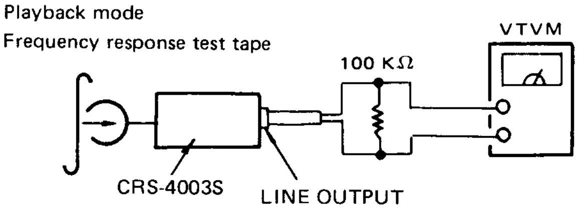
6. Measuring the signal-to-noise ratio (in playback mode)

Play the 333 Hz level adjusting tape MTT-112 back. Let this signal level at the LINE OUTPUT jack be a standard. In turn, play a unrecorded tape back and read the noise output level. Subtract the noise level form the signal level in dB. The standard signal-to-noise ratio is around 50 dB.

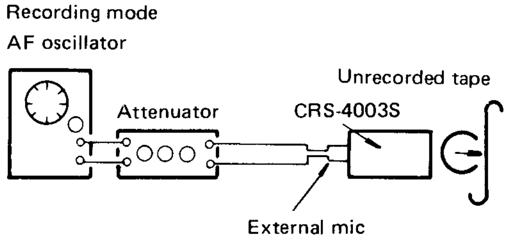

Playback mode
(333 Hz)
VTVM
CRS-4003S
LINE OUTPUT

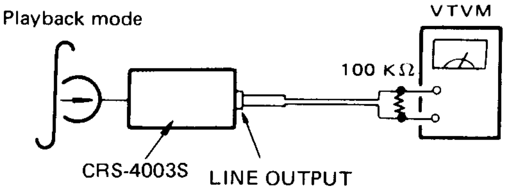

Playback mode
Unrecorded tape
VTVM
CRS-4003S
LINE OUTPUT

7. **Measuring the playback frequency response**
Play the frequency response test tape back. Read the signal levels at the LINE OUTPUT jack at various frequencies in reference to the 333 Hz level.

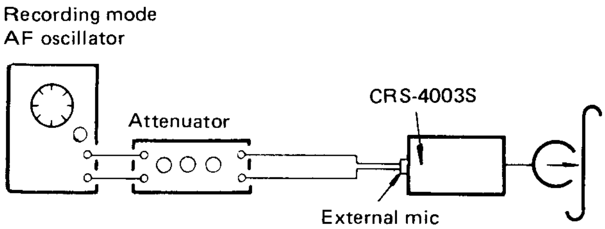

Playback mode
Frequency response test tape
VTVM
100 KΩ
CRS-4003S
LINE OUTPUT

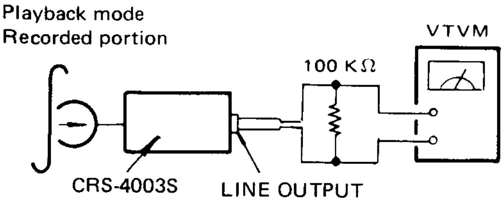
8. **Measuring the combined recording and playback frequency response**
Connect a 1 kHz, –90 dBV signal from an audio-frequency oscillator to the external mic jack and record it. Similarly, record a 60 Hz, 100 Hz, 6 kHz, and 8 kHz signals. In turn, play the recorded signals back. Read the signal levels at the LINE OUTPUT jack in reference to 1 kHz, 0 dB signal.


Recording mode
AF oscillator
Unrecorded tape
Attenuator
CRS-4003S
External mic


Playback mode
VTVM
100 KΩ
CRS-4003S
LINE OUTPUT

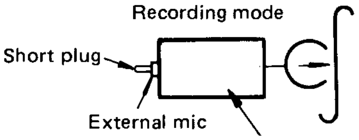
9. **Measuring the combined recording and playback level**
Connect a 1 kHz, –90 dBV signal from an audio-frequency oscillator to the external mic jack and record it. In turn, play the recorded signal back. Read the signal level at the LINE OUTPUT jack. The normal signal level will be 775 V rms.

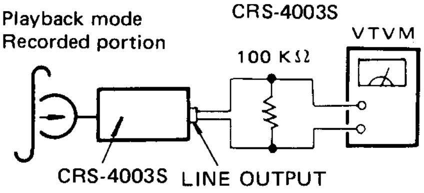

Recording mode
AF oscillator
CRS-4003S
Attenuator
External mic


Playback mode
Recorded portion
VTVM
100 KΩ
CRS-4003S
LINE OUTPUT

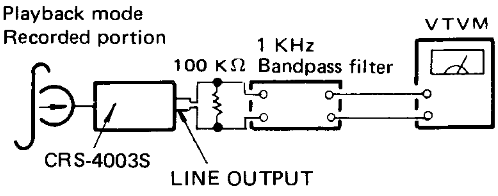
10. **Measuring the combined recording and playback distortion.**
Record and playback a signal in a manner similar to that for Item 9 above. Measure the distortion, which is normally around 2.5%.

11. **Measuring the combined recording and playback signal-to-noise ratio**
Record a signal in a manner similar to that for Item 9 above. Rewind the tape a little. Make the external mic jack short using a short plug and erase a part of the rewound tape. Read the signal level for the 1 kHz, –60 dBV input and the noise level for the erased part. Subtract the noise level from the signal level in dB. The normal signal-to-noise ratio is around 47 dB.

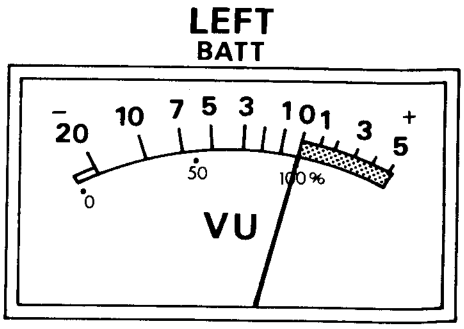

Recording mode
Short plug
External mic
CRS-4003S


Playback mode
Recorded portion
VTVM
100 KΩ
CRS-4003S
LINE OUTPUT

12. **Measuring the erasing level**
Connect a 1 kHz bandpass filter to the LINE OUTPUT jack on the CRS-4000 as shown. Play back the tape used in Item 11 above. (The tape consists of the 1 kHz, –60 dB signal recorded portion and erased portion.) Read the output level for the erased portion in reference to that of the signal recorded portion. The normal erasing level is less than –60 dB.


Playback mode
Recorded portion
VTVM
1 KHz
100 KΩ
Bandpass filter
CRS-4003S
LINE OUTPUT

13. **Calibrating the VU meter**
Connect a precisely-adjusted 9 V DC power source to the DC 12 V jack. Set the CRS-4000 in the playback mode and set the METER switch to "BATT". Adjust R506 until the meter pointer swings to the division "0" on the red zone.


LEFT
BATT
–
20
10
7
5
3
1
0
1
3
5
+
0
50
100%
VU

6. CURRENT CONSUMPTION

	VOLUME	PLAY	REC
RADIO	Maximum	1100	1350
	Minimum	190	300
TAPE	Maximum	1060	–
	Minimum	240	270
F.F.	–	280	–
REW	–	280	–

*Units in mA.

The above values may differ slightly depending on individual sets.

Measuring conditions (standard inputs)

Radio

MW: 5 mV, 400 Hz, 30% mod.

FM: 1 mV, 400 Hz, 30% mod.

Tape Recorder

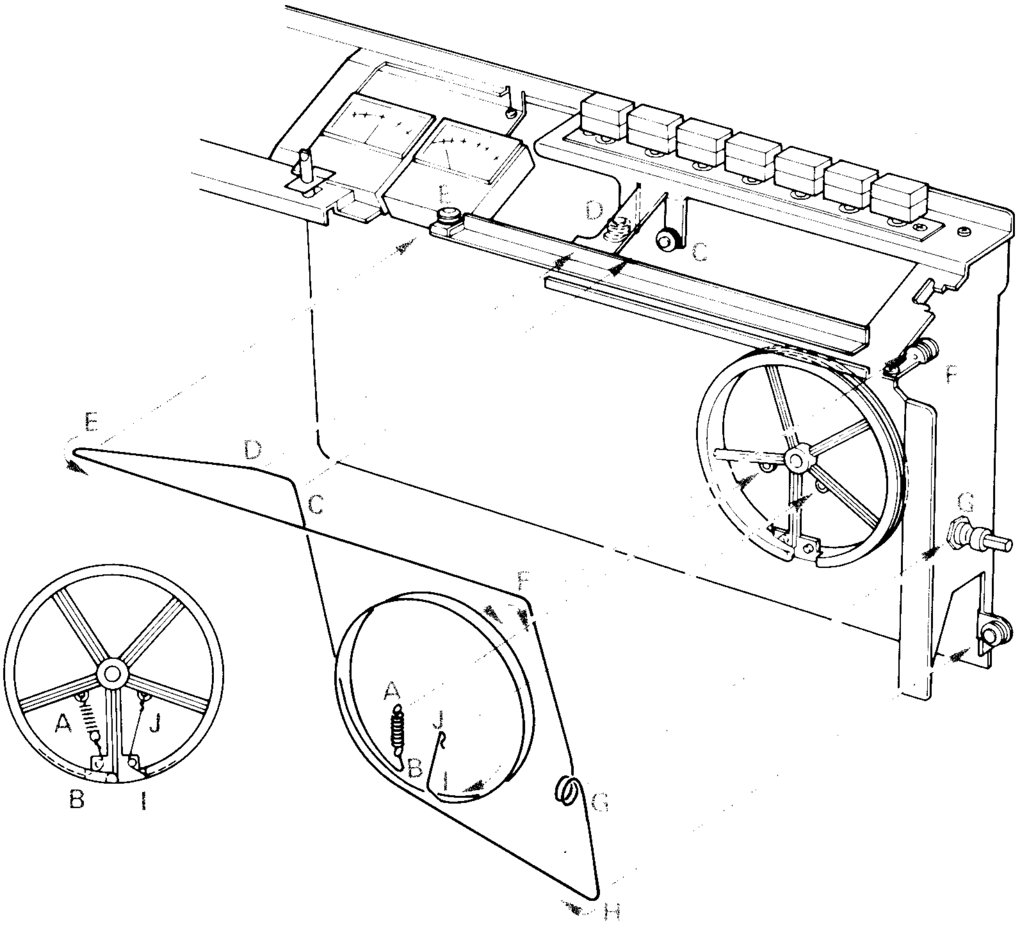
Recording: 1 mV, 1 kHz at mic input

Playback: Test tape MTT-112 (333 Hz, 250 pwb/mm)

7. SERVICE GUIDE

1. Battery voltage
   Many customers often determine that the set is faulty when malfunctioning as they are not aware of used-up battery. Before operation, therefore, make certain that the battery voltage is higher than 9 V.
2. Battery polarity
   In loading the battery, particular care should be taken in its polarity as wrong placing may damage transistors and motor.
3. Cleaning the heads
   The head slit contaminated with tape chips and powder, rubber, dust, or dirt leads to insufficient sound volume and tone deterioration. Wipe such contaminants off the slit using soft cloth moistened with alcohol or carbon tetrachloride.

8. DIAL STRINGING PROCEDURES



9. ALIGNMENT PROCEDURES

9.1 MW ALIGNMENT PROCEDURES

(FUNCTION switch in "MW".)

Step	Connect Signal Generator to:	Set Signal Frequency to:	Set Tuning Dial to:	Indicator Connection	Adjust:	Procedure
1	TP-5.	455 kHz with ±35 kHz sweep.	–	Oscilloscope vertical connector to TP-6 thru diode.	L109, L115, and L116.	Adjust inductors for highest and symmetric curve.
2	Indirect coupling near set antenna coil.	515 kHz with modulation.	515 kHz (max. capacitance).	VTVM across speaker voice coil.	L113 (OSC coil).	Adjust for max. output.
3		1650 kHz with modulation.	1650 kHz (min. capacitance).		C158 (trimmer).	
4	Repeat Steps 2 and 3.					
5	Indirect coupling near set antenna coil.	600 kHz with modulation.	600 kHz.	VTVM across speaker voice coil.	L112 (antenna coil).	Adjust for max. output.
6		1400 kHz with modulation.	1400 kHz.		CT-1 (trimmer).	
7	Repeat Steps 5 and 6.					

Note:

1. In adjustment, connect the signal generator grounding terminal (–) to that of the set.
2. Modulate the signal generator to 30% with a 400 Hz signal.
3. Reduce the signal generator as low as possible.
4. Set the VOLUME control for the maximum level.

9.2 SW ALIGNMENT PROCEDURES

(FUNCTION switch in "SW")

Step	Connect Signal Generator to:	Set Signal Frequency to:	Set Tuning Dial to:	Indicator Connection	Adjust:	Procedure
1	Indirect coupling near set antenna coil.	5.7 MHz with modulation.	5.7 MHz (max. capacitance).	VTVM across speaker voice coil.	L114 (OSC coil).	Adjust for max. output.
2		18.5 MHz with modulation.	18.5 MHz (min. capacitance).		C159 (trimmer).	
3		Repeat Steps 1 and 2.				
4		7 MHz with modulation	7 MHz	VTVM across speaker voice coil.	L112 (antenna coil).	Adjust for max. output
5		18.5 MHz with modulation	18.5 MHz		CT-4 (trimmer).	
6	Repeat Steps 4 and 5.					

Note:

1. In adjustment, connect the signal generator grounding terminal (–) to that of the set.
2. Modulate the signal generator to 30% with a 400 Hz signal.
3. Reduce the signal generator as low as possible.
4. Set the VOLUME control for the maximum level.

9.3 FM ALIGNMENT PROCEDURE

(FUNCTION switch in "FM" and MODE switch in "MONO".)

Step	Connect Signal Generator to:	Set Signal Frequency to:	Set Tuning Dial to:	Indicator Connection	Adjust:	Procedure
1	TP-1.	10.7 MHz sweep.	–	Oscilloscope vertical connector to TP-4 thru diode	L104, L108, and L110.	Adjust inductor for highest and symmetric curve.
2				Oscilloscope vertical connector to TP-2 thru diode.	L111.	Adjust inductor for symmetric curve around 10.7 MHz.
3	TP-7.	87 MHz with modulation.	87 MHz (max. capacitance).	VTVM across speaker voice coil.	L106 (OSC coil).	Adjust for max. output.
4		109 MHz with modulation.	109 MHz (min. capacitance).		CT-2 (trimmer).	
5	Repeat Steps 3 and 4.					
6	TP-7.	90 MHz with modulation.	90 MHz.	VTVM across speaker voice coil.	L102.	Adjust for max. output.
7		106 MHz with modulation.	106 MHz.		CT-3 (trimmer).	
8	Repeat Steps 6 and 7.					

NOTE:
1. In adjustment, connect the signal generator grounding terminal (–) to that of the set.
2. Modulate the signal generator to 30% with a 400 Hz signal.
3. Reduce the signal generator as low as possible.
4. Set the VOLUME control for the maximum level.

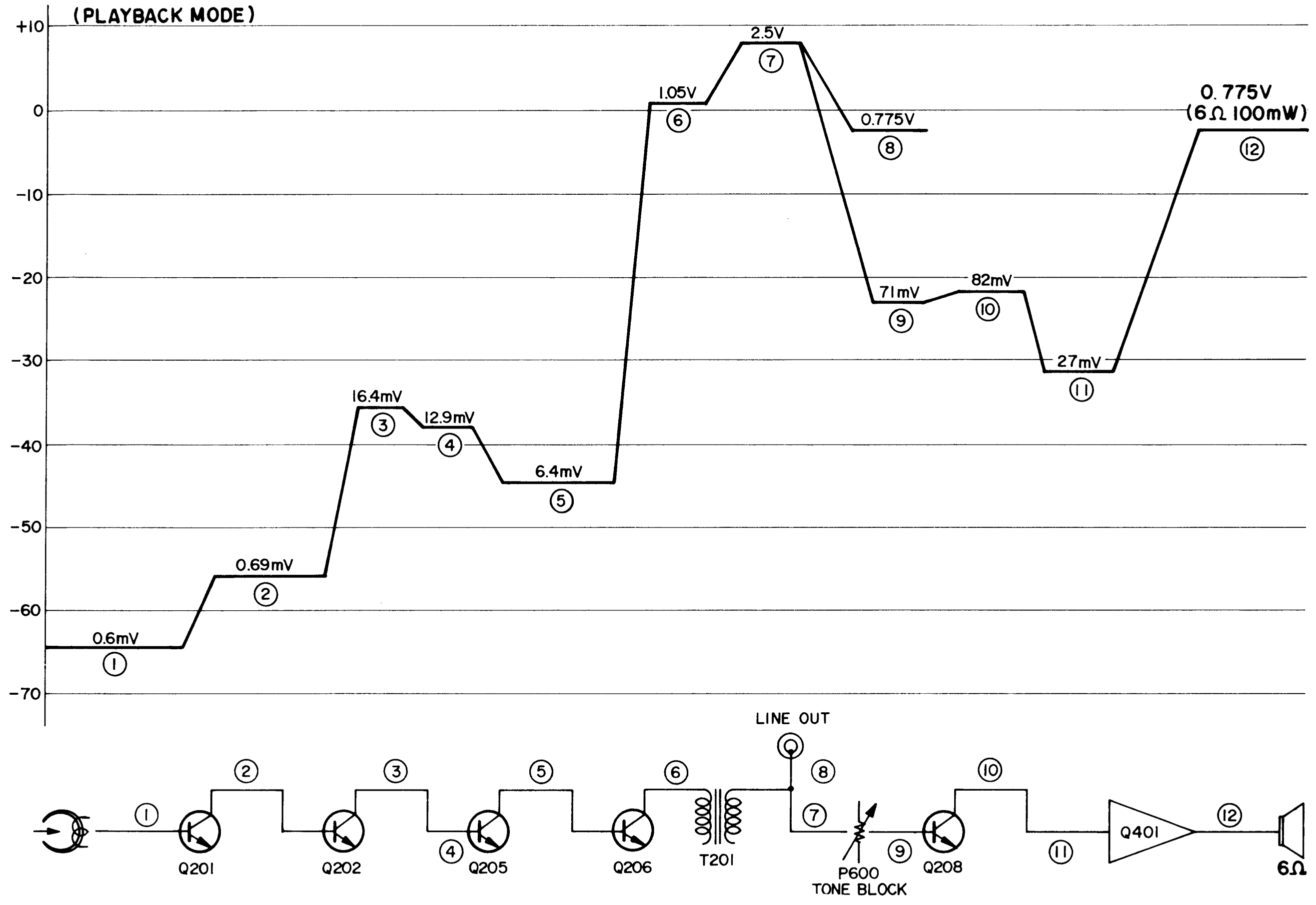
9.4 FM STEREO SEPARATION ALIGNMENT PROCEDURE

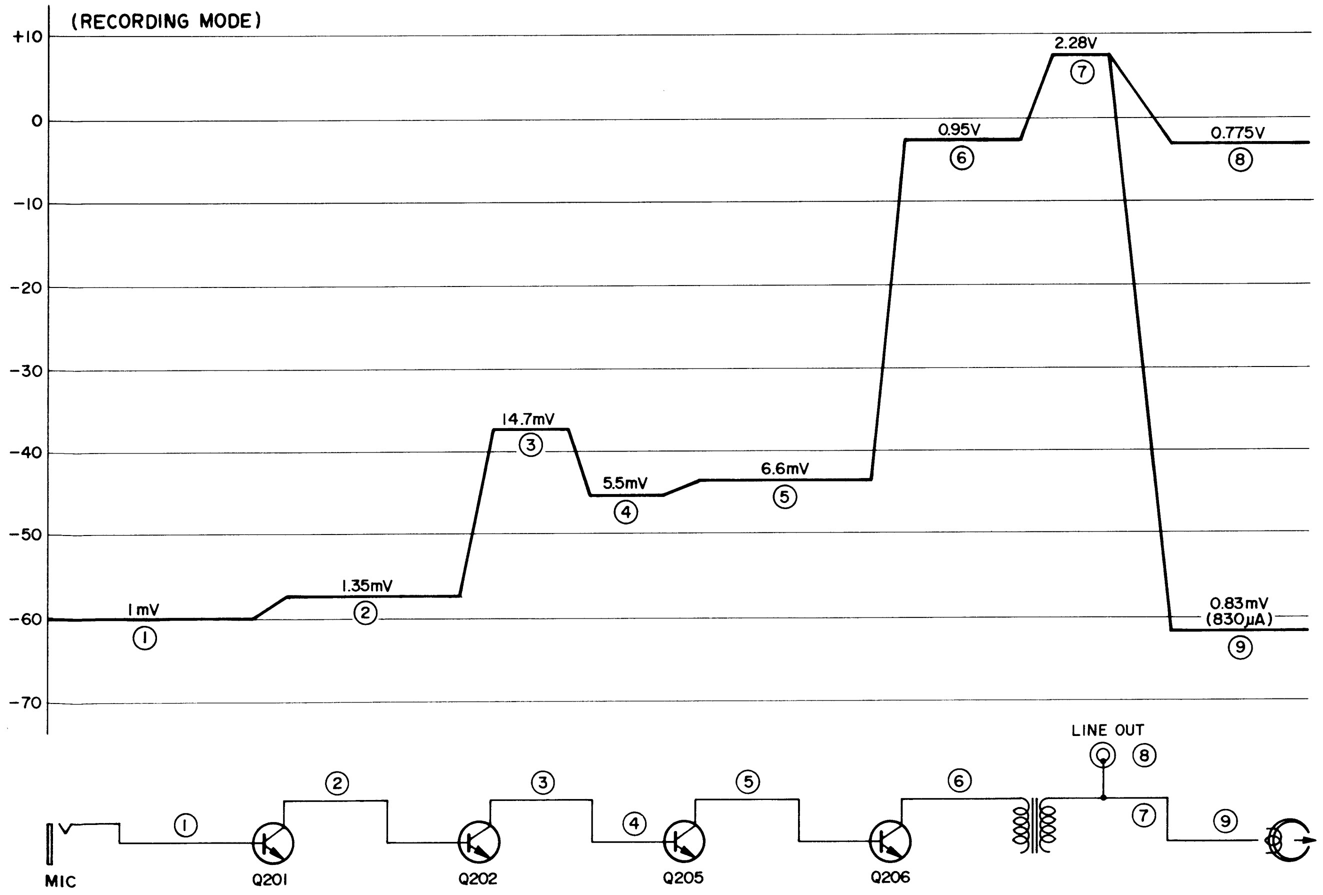
(FUNCTION switch in "FM" and MODE switch in "STEREO".)

Step	Connect Signal Generator to:	Set Signal Frequency to:	Set Tuning Dial to:	Indicator Connection	Adjust:	Procedure
1	98 MHz to TP-7.	Pilot (19 kHz).	98 MHz.	VTVM or oscilloscope to TP-3.	L117.	Adjust inductor for max. output.
2		STEREO SSG SUB Signal.		VTVM to LINE OUTPUT jack.	L118.	Adjust inductor for max. output or least distortion.
3		L channel			R-174.	Adjust semifixed resistor for min. output in R channel.
4		R channel				Adjust semifixed resistor for min. output in L channel.
5	Repeat Steps 3 and 4.					

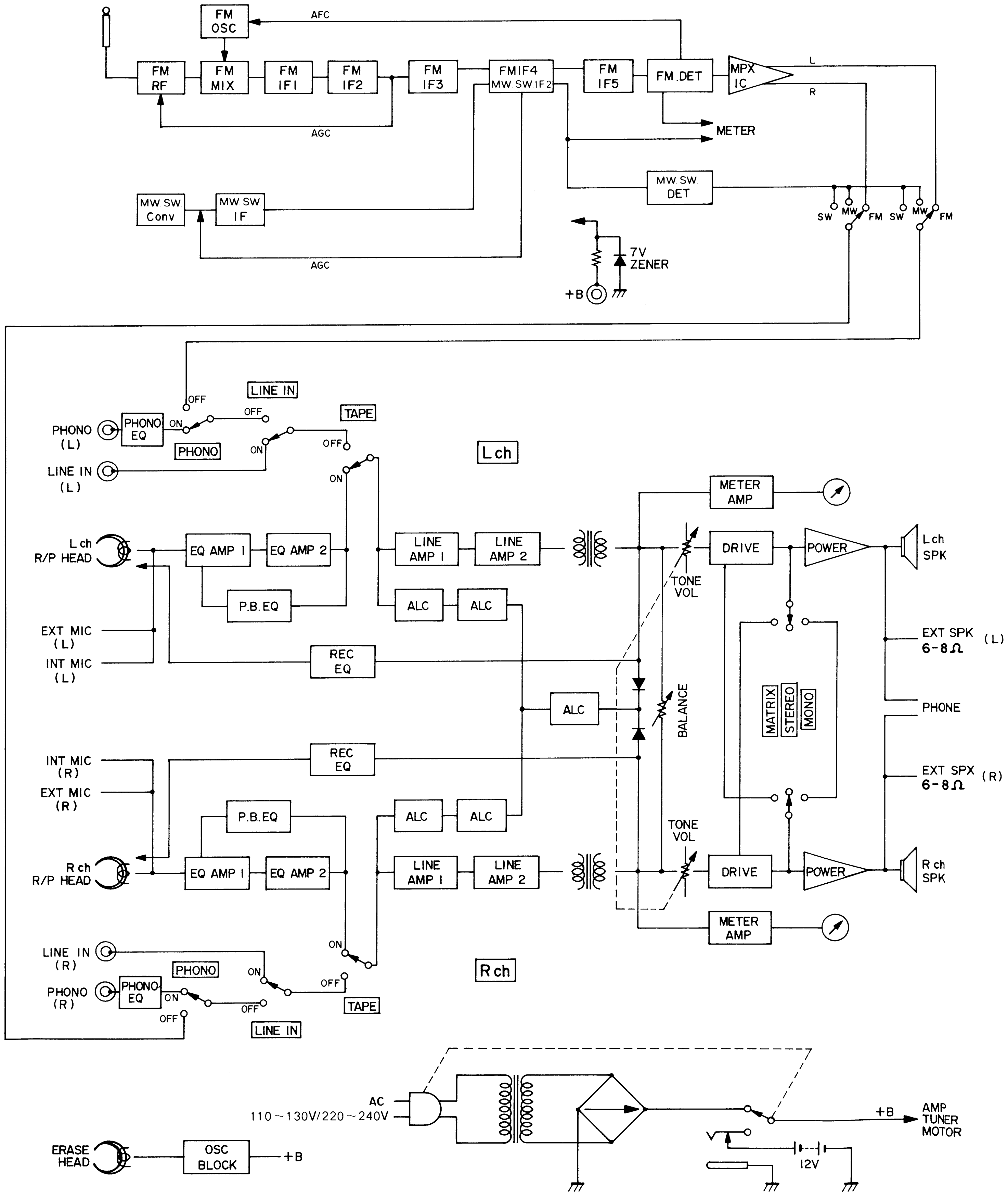
10. DIAGRAMS

10.1 LEVEL DIAGRAMS

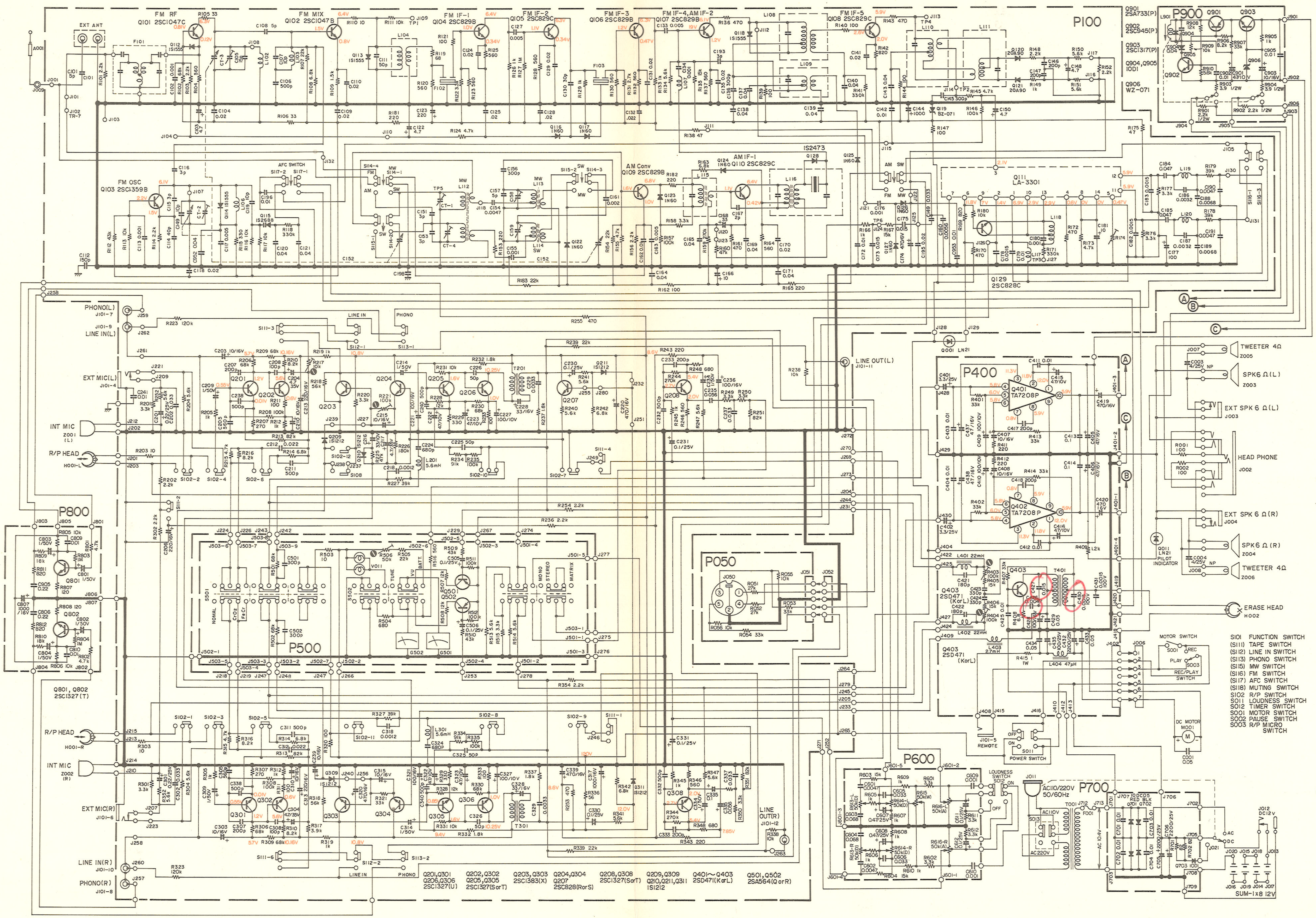




10.2 BLOCK DIAGRAM

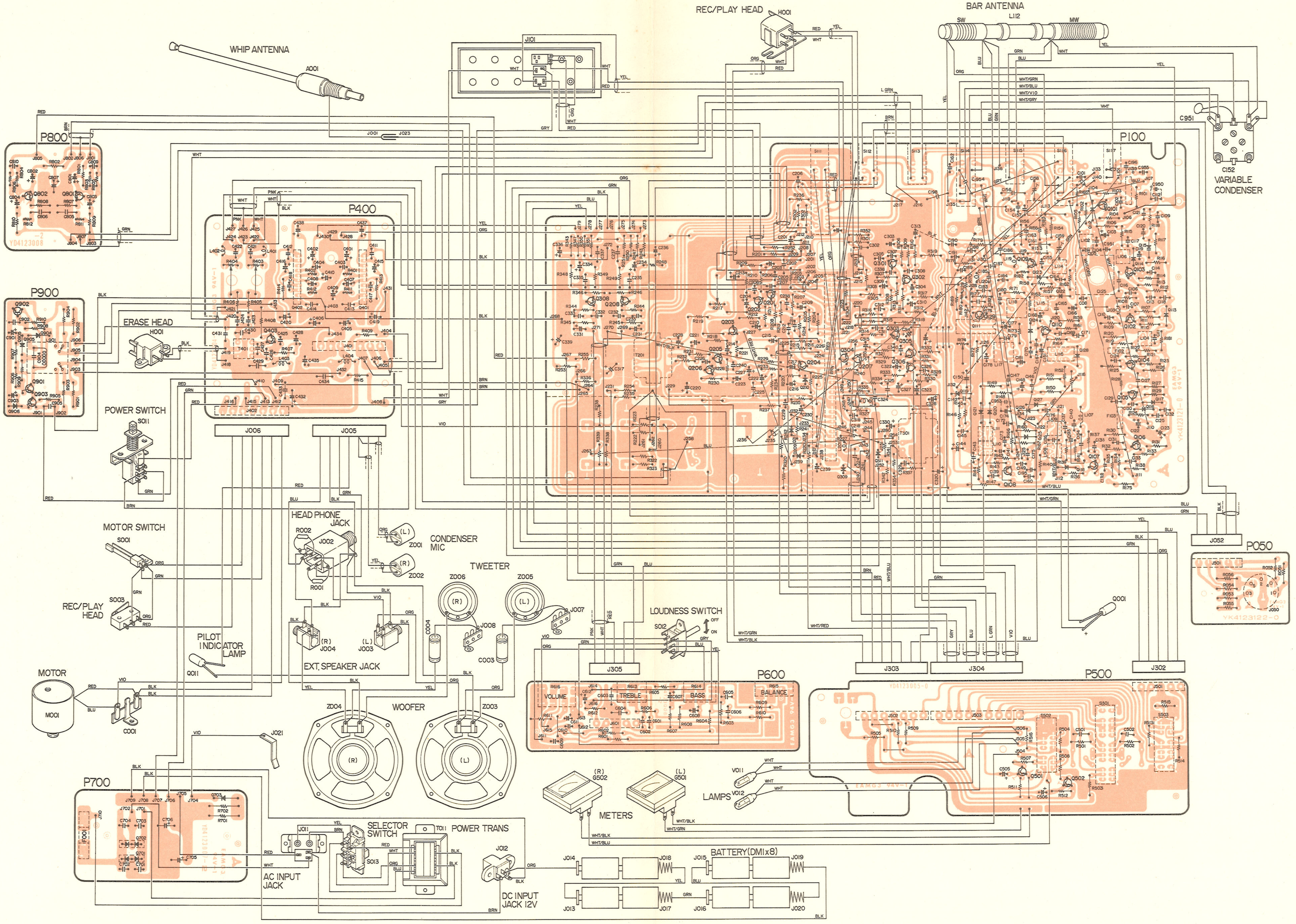

FM OSC
AFC
FM RF
FM MIX
FM IF1
FM IF2
FM IF3
FMIF4 MW SW IF2
FM IF5
FM DET
MPX IC
L
R
AGC
METER
MW SW DET
MW SW Conv
MW SW IF
AGC
7V ZENER
+B
SW
MW
FM
PHONO (L)
PHONO EQ
LINE IN (L)
LINE IN
PHONO
TAPE
ON
OFF
L ch
L ch R/P HEAD
EQ AMP 1
EQ AMP 2
P.B.EQ
LINE AMP 1
LINE AMP 2
ALC
METER AMP
DRIVE
POWER
L ch SPK
TONE VOL
EXT MIC (L)
INT MIC (L)
REC EQ
BALANCE
MATRIX
STEREO
MONO
EXT SPK (L) 6-8Ω
PHONE
EXT SPX (R) 6-8Ω
INT MIC (R)
EXT MIC (R)
R ch R/P HEAD
R ch SPK
LINE IN (R)
PHONO (R)
R ch
ERASE HEAD
OSC BLOCK
AC 110~130V/220~240V
+B
AMP TUNER MOTOR
12V

10.3 SCHEMATIC DIAGRAM


P100
P900
P800
P500
P400
P050
P600
P700
FM RF Q101 2SC1047C
FM MIX Q102 2SC1047B
FM IF-1 Q104 2SC829B
FM IF-2 Q105 2SC829C
FM IF-3 Q106 2SC829B
FM IF-4, AM IF-2 Q107 2SC829B
FM IF-5 Q108 2SC829C
FM OSC Q103 2SC1359B
AM Conv Q109 2SC829B
AM IF-1 Q110 2SC829C
Q111 LA-3301
Q129 2SC828C
Q901 2SA733(P)
Q902 2SC945(P)
Q903 2SC1317(P)
Q904,Q905 1OD1
Q906 WZ-071
EXT ANT
AFC SWITCH
PHONO(L) J101-7
LINE IN(L) J101-9
EXT MIC(L) J101-4
INT MIC Z001 (L)
R/P HEAD H001-L
LINE IN
PHONO
LINE OUT(L) J101-11
TWEETER 4Ω Z005
SPK 6 Ω(L) Z003
EXT SPK 6 Ω(L) J003
HEAD PHONE J002
EXT SPK 6 Ω(R) J004
SPK 6 Ω(R) Z004
TWEETER 4Ω Z006
ERASE HEAD H002
Q401 TA7208P
Q402 TA7208P
Q403 2SD471 (KorL)
Q409 2SD471 (KorL)
Q011 LN21 PILOT INDICATOR
Q001 LN21
MOTOR SWITCH
REC PLAY S003
REC/PLAY SWITCH
DC MOTOR M001
C001 0.05
REMOTE J101-5
POWER SWITCH S011
LOUDNESS SWITCH S012
AC110/220V 50/60Hz
AC110V AC220V
SUM-1x8 12V
J012 DC12V
Q801, Q802 2SC1327(T)
R/P HEAD H001-R
INT MIC Z002 (R)
EXT MIC(R) J101-6
LINE IN(R) J101-10
PHONO(R) J101-8
LINE OUT(R) J101-12
Q201,Q301 Q206,Q306 2SC1327(U)
Q202,Q302 Q205,Q305 2SC1327(SorT)
Q203,Q303 2SC1383(X)
Q204,Q304 Q207 2SC828(RorS)
Q208,Q308 2SC1327(SorT)
Q209,Q309 Q210,Q211,Q311 1S1212
Q401～Q403 2SD471(KorL)
Q501,Q502 2SA564(QorR)
S101 FUNCTION SWITCH
(S111) TAPE SWITCH
(S112) LINE IN SWITCH
(S113) PHONO SWITCH
(S115) MW SWITCH
(S116) FM SWITCH
(S117) AFC SWITCH
(S118) MUTING SWITCH
S102 R/P SWITCH
S011 LOUDNESS SWITCH
S012 TIMER SWITCH
S001 MOTOR SWITCH
S002 PAUSE SWITCH
S003 R/P MICRO SWITCH

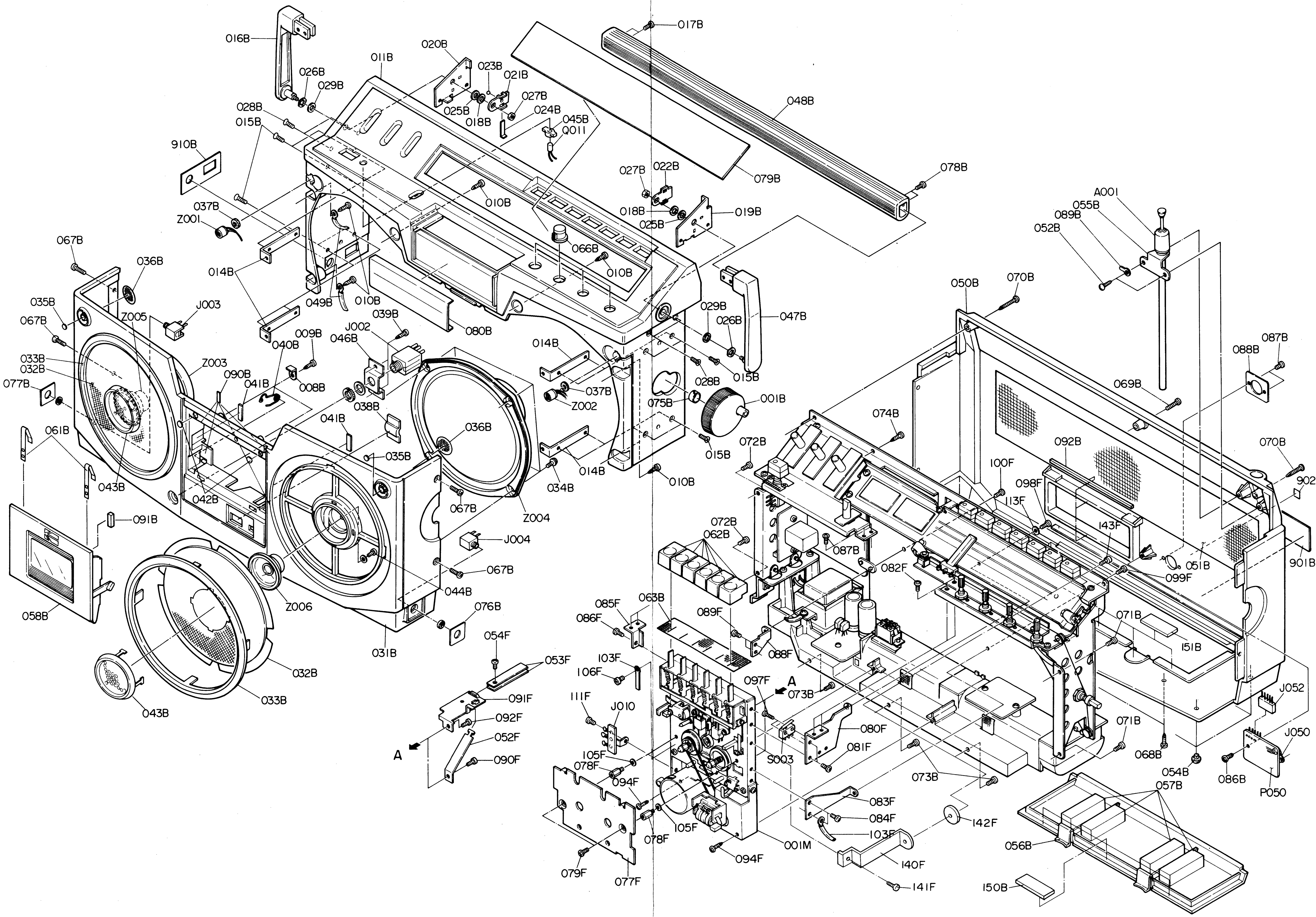
0 in 220V

10.4 CIRCUIT BOARD DIAGRAM

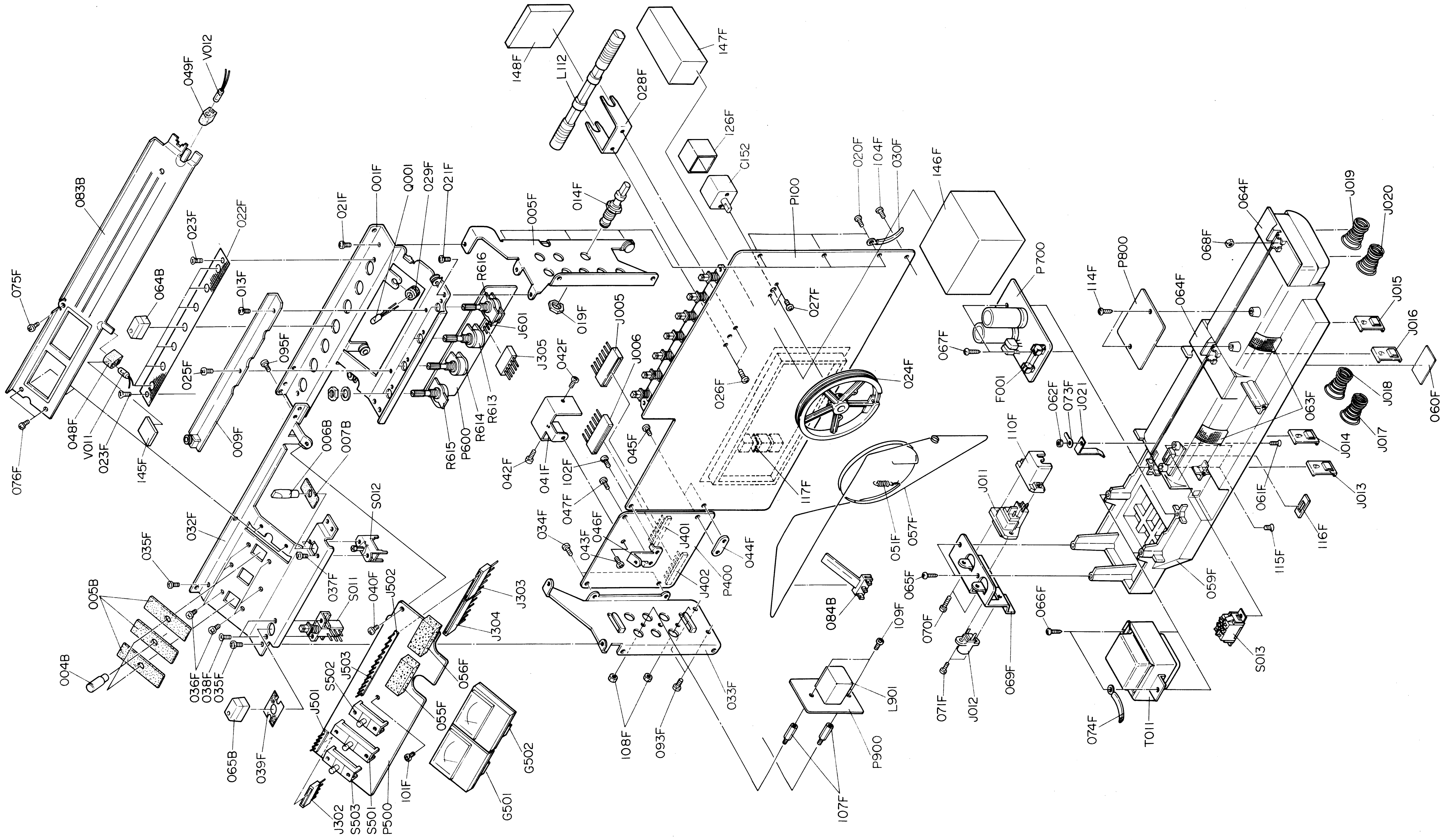

WHIP ANTENNA
A001
J101
REC/PLAY HEAD
H001
BAR ANTENNA
L112
SW
MW
C951
C152
VARIABLE
CONDENSER
P800
P900
P400
P100
ERASE HEAD
H001
POWER SWITCH
S011
J006
J005
MOTOR SWITCH
S001
REC/PLAY
HEAD
S003
HEAD PHONE
JACK
R002
J002
R001
CONDENSER
MIC
Z001
Z002
TWEETER
Z006
Z005
J007
J008
C004
C003
(R)
J004
(L)
J003
EXT. SPEAKER JACK
PILOT
INDICATOR
LAMP
Q011
MOTOR
M001
C001
J021
LOUDNESS SWITCH
S012
OFF
ON
J305
P600
VOLUME
TREBLE
BASS
BALANCE
J303
J304
J302
P500
J052
P050
Q001
Z004
WOOFER
Z003
(R)
G502
(L)
G501
METERS
V011
V012
LAMPS
P700
J011
SELECTOR
SWITCH
S013
T011
POWER TRANS
J012
DC INPUT
JACK 12V
AC INPUT
JACK
BATTERY(DMIx8)
J014
J018
J015
J019
J013
J017
J016
J020

11. EXPLODED VIEWS

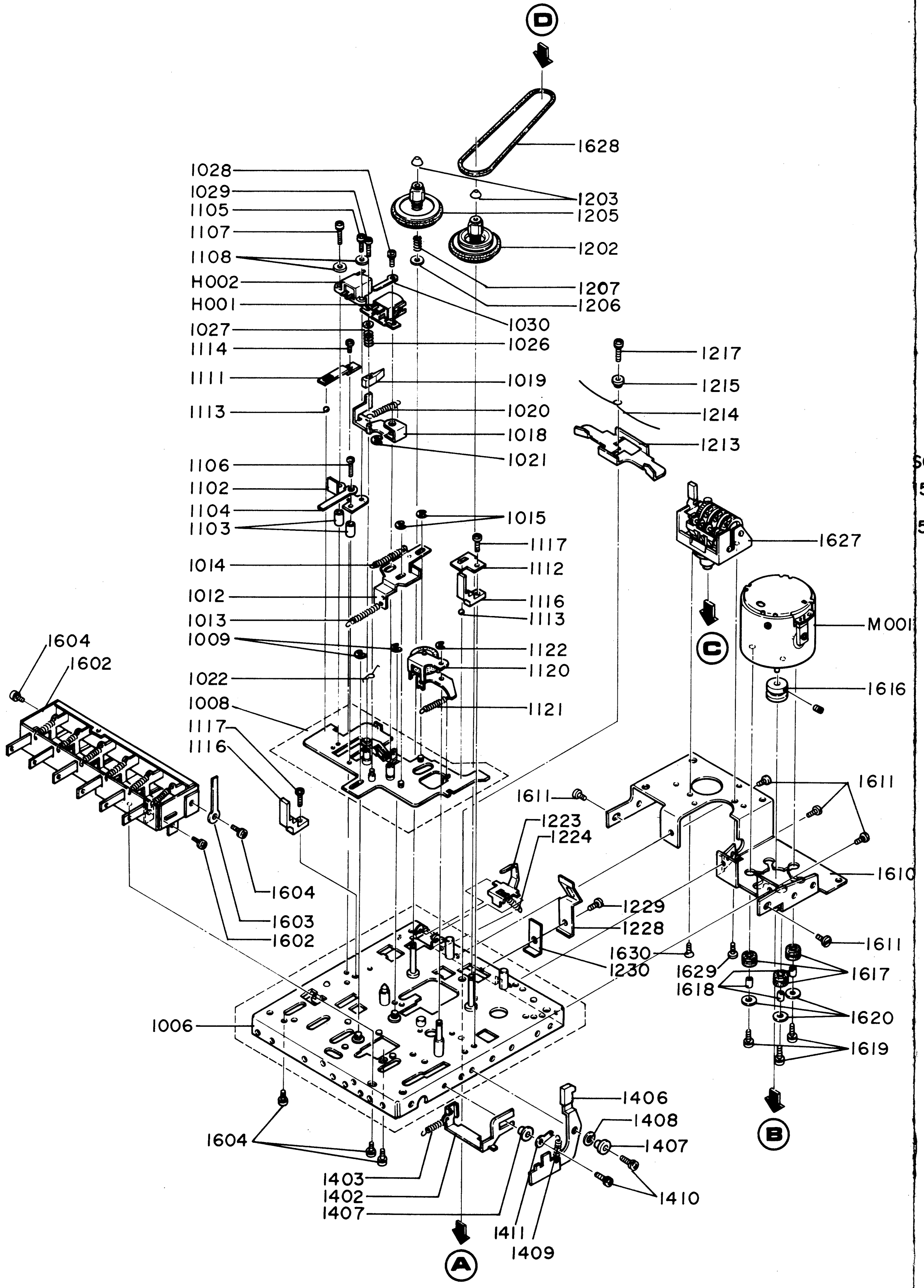
11.1 CABINET EXPLODED VIEW

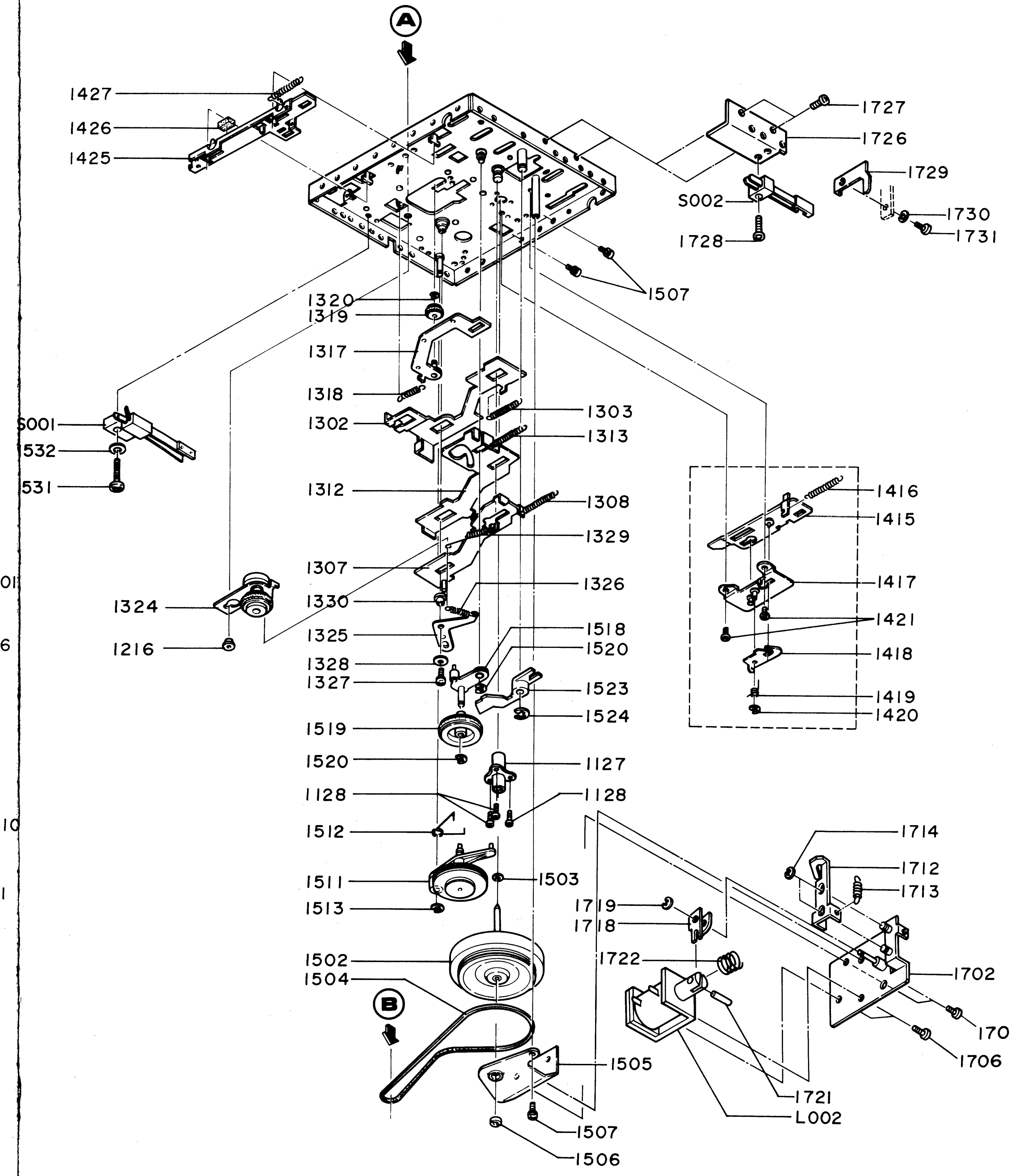

016B
026B
029B
011B
020B
023B
021B
027B
025B
018B
024B
045B
Q011
017B
048B
028B
015B
910B
079B
078B
027B
022B
018B
025B
019B
037B
Z001
010B
066B
010B
067B
036B
014B
049B
010B
035B
J003
Z005
067B
039B
J002
046B
009B
040B
080B
014B
029B
026B
047B
033B
032B
Z003
090B
041B
008B
077B
038B
037B
Z002
028B
015B
075B
001B
041B
036B
061B
035B
014B
034B
010B
015B
043B
042B
067B
Z004
091B
J004
058B
067B
Z006
044B
076B
032B
033B
031B
043B
A001
055B
089B
052B
050B
070B
087B
088B
069B
074B
072B
092B
070B
100F
098F
902B
113F
143F
072B
062B
087B
082F
051B
901B
099F
085F
086F
063B
089F
088F
071B
151B
054F
053F
103F
106F
091F
097F
A
073B
J052
092F
111F
J010
080F
081F
S003
071B
052F
A
090F
105F
078F
094F
073B
068B
054B
057B
086B
J050
P050
083F
084F
103F
142F
105F
078F
001M
094F
140F
056B
079F
077F
141F
150B

11.2 TUNER ASSEMBLY EXPLODED VIEW


V012
049F
083B
023F
022F
075F
064B
013F
025F
095F
048F
V011
023F
076F
145F
009F
021F
001F
Q001
029F
021F
005F
014F
R616
J601
J305
019F
R613
R614
P600
R615
006B
007B
S012
032F
035F
005B
004B
036F
038F
035F
065B
039F
037F
S011
040F
J502
J503
S502
J501
J302
S503
S501
P500
101F
055F
056F
J303
J304
G502
G501
148F
L112
028F
147F
126F
C152
P100
020F
104F
030F
146F
027F
J005
J006
042F
026F
024F
045F
041F
042F
102F
047F
034F
043F
046F
J401
J402
P400
044F
033F
108F
093F
117F
051F
057F
084B
109F
L901
P900
107F
P700
067F
F001
062F
073F
J021
110F
J011
065F
070F
071F
J012
069F
066F
074F
T011
114F
P800
064F
068F
064F
J019
J020
J015
J016
J018
J017
J014
063F
060F
J013
061F
116F
115F
059F
S013

11.3 TAPE RECORDER MECHANICAL EXPLODED VIEW


D
1628
1203
1205
1202
1207
1206
1028
1029
1105
1107
1108
H002
H001
1027
1114
1111
1113
1030
1026
1019
1020
1018
1021
1217
1215
1214
1213
1106
1102
1104
1103
1015
1117
1112
1116
1113
1627
1014
1012
1013
1009
1122
1120
1121
M001
C
1022
1008
1117
1116
1604
1602
1616
1611
1611
1223
1224
1610
1604
1603
1602
1229
1228
1230
1630
1611
1629
1617
1618
1620
1619
1006
B
1406
1408
1407
1604
1403
1402
1407
1410
1411
1409
A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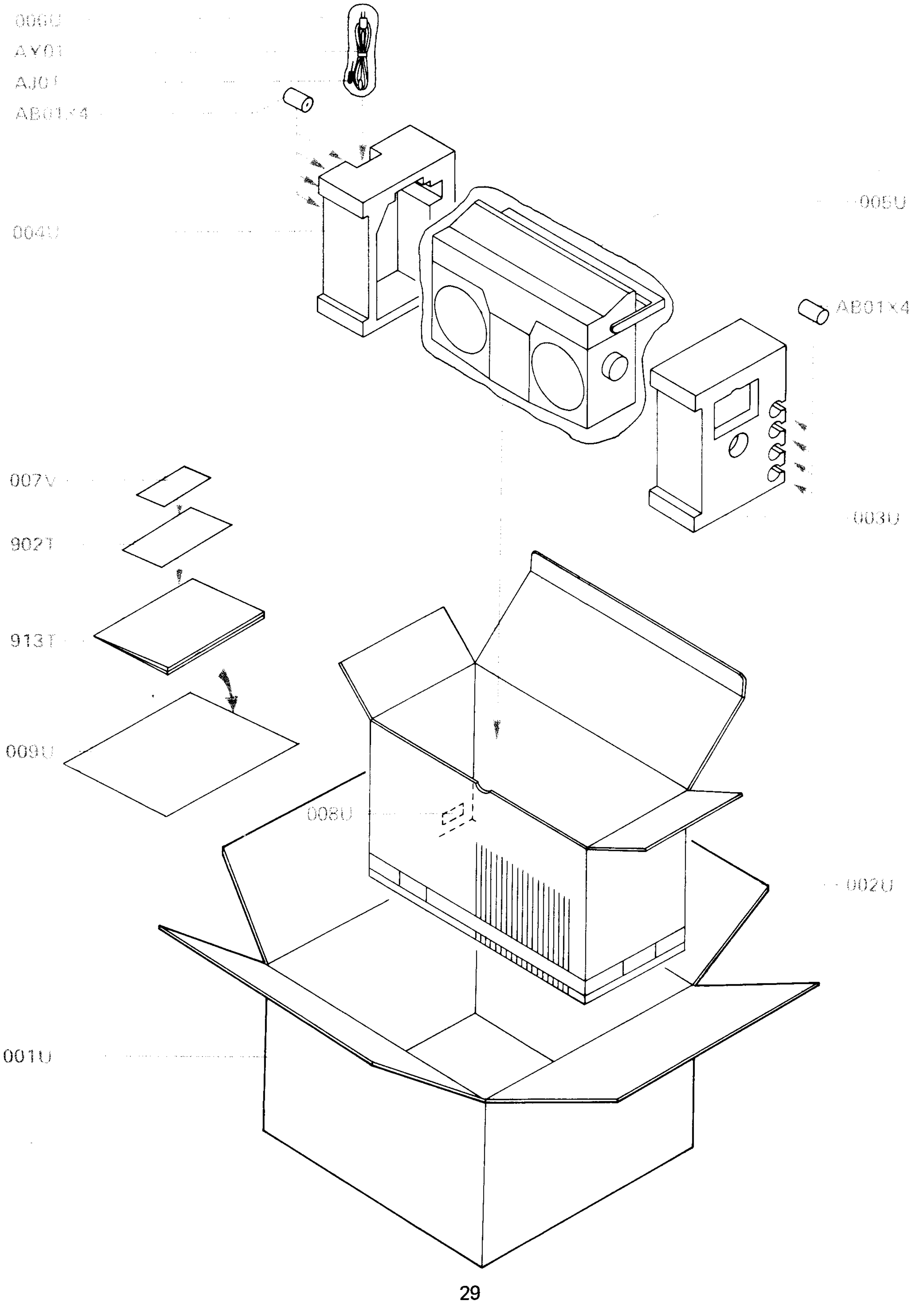
11.4 PACKING MATERIAL EXPLODED VIEW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12. PARTS LIST

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
*	1	4182064400	Case Assembly, Incl. A, B, C, D, E
*	1	4182064410	Case Assembly, Incl. A, B, C
A	1	4182064420	Case Assembly, Upper
011B	1	4183064010	Case
014B	4	4123160030	Bracket
015B	8	51040306A9	F.H.M. Screw, F3 x 6
016B	1	4123104012	Retainer
017B	2	51100306S9	B.H.M. Screw, B3 x 6
018B	2	54060600A0	T.L. Washer
019B	1	4123160052	Bracket
020B	1	4123160062	Bracket
021B	1	4123002012	Arm
022B	1	4123002022	Arm
023B	1	61030010T0	Ball
024B	1	4123115020	Spring
025B	2	59061405G9	Washer
026B	2	54130600Q0	Wave Washer
027B	2	53110603A9	Nut
028B	4	54040303A9	F.H.M. Screw, F3 x 3
029B	2	59061405G9	Washer
037B	2	4123107032	Sheet
047B	1	4123104012	Retainer
048B	1	4123253010	Handle
078B	2	51100306S9	B.H.M. Screw, B3 x 6
079B	1	4123158012	Window
080B	1	4182063010	Escutcheon
910B	1	4182265010	Indicator
B	1	4123064430	Case Assembly, Front
031B	1	4123064023	Case
032B	2	4123202012	Net
033B	2	4123353012	Ring
035B	2	3484063050	Escutcheon
036B	2	4123107012	Sheet
038B	1	4123158032	Window
041B	2	3426056020	Buffer
042B	2	3411056020	Buffer
090B	4	3370107070	Sheet
C	1	4123064490	Case Assembly
008B	2	4123104060	Retainer
009B	2	51280308B0	B.H. Tapped Screw, B3 x 8ST
010B	6	51280310B0	B.H. Tapped Screw, B3 x 10ST
Z001	1	MS50090050	Microphone
Z002	1	MS50090050	Microphone
D	1	4182257400	Lid Assembly, Bottom
050B	1	4123257030	Lid
051B	1	4123107022	Sheet
054B	4	3441057010	Leg
092B	1	4123056020	Buffer
901B	1	4182265020	Indicator
151B	5	4123107070	Sheet
E	1	4123257410	Lid Assembly, Battery
056B	1	4123257022	Lid
057B	4	4123118010	Spacer
150B	3	4123107070	Sheet
F	1	4183064440	Case Assembly, Cassette
058B	1	4183064500	Case
061B	2	3320115042	Spring
091B	1	3426056020	Buffer
G	1	4123064450	Case Assembly, Battery
059F	1	4123064044	Case

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
061F	1	51040205S0	F.H.M. Screw, F2 x 5
062F	1	53110203A0	Nut
063F	2	3397007010	Strip
064F	2	4123053012	Cover
068F	1	53110303A9	Nut
073F	1	62021030W0	Lug
J013	1	YL12010710	Terminal (+)
J014	1	YL12010710	Terminal (+)
J015	1	YL12010710	Terminal (+)
J016	1	YL12010710	Terminal (+)
J017	1	YL11010090	Terminal (—)
J018	1	YL11010090	Terminal (—)
J019	1	YL11010090	Terminal (—)
J020	1	YL11010090	Terminal (—)
J021	1	YL14010150	Terminal
			MECHANICAL PARTS
001B	1	4136154503	Knob
001F	1	4123105502	Chassis
001M	1	4183304013	Mechanism
004B	3	4123154010	Knob
005B	3	4123303010	Mask
005F	1	4123160502	Bracket
006B	1	4123154022	Knob
007B	1	4123107040	Sheet
007V	1	4136071010	Cleaner
009F	1	4123051502	Guide
013F	1	51100306A9	B.H.M. Screw, B3 x 6
014F	1	4123112502	Shaft
019F	1	53111045A0	Hexagon Nut
020F	3	51100306A9	B.H.M. Screw, B3 x 6
021F	2	51100306A9	B.H.M. Screw, B3 x 6
022F	1	4123107050	Sheet
023F	2	51040306S9	F.H.M. Screw, F3 x 6
024F	1	4123159010	Drum
025F	1	51100306A9	B.H.M. Screw, B3 x 6
026F	2	51100306A9	B.H.M. Screw, B3 x 6
027F	2	51102605A0	B.H.M. Screw, B2.6 x 5
028F	1	4123271012	Holder
029F	1	4123259020	Bushing
030F	1	1382005030	Clamper
032F	1	4123105020	Chassis
033F	1	4123160022	Bracket
034B	8	51480306A9	F. Washer Screw
034F	2	51100306A9	B.H.M. Screw, B3 x 6
035F	2	51100304A9	B.H.M. Screw, B3 x 4
036F	6	51102604A0	B.H.M. Screw, B2.6 x 4
037F	2	51102604A0	B.H.M. Screw, B2.6 x 4
038F	2	51040306S9	F.H.M. Screw, F3 x 6
039B	2	51280308B0	B.H. Tapped Screw, B3 x 8ST
039F	1	4123107060	Sheet
040B	1	3435115013	Spring
040F	1	51100306A9	B.H.M. Screw, B3 x 6
041F	1	4123267012	Heatsink
042F	2	51100306A9	B.H.M. Screw, B3 x 6
043B	2	4123353020	Ring
043F	1	51100306A9	B.H.M. Screw, B3 x 6
044B	2	51480306A9	F. Washer Screw
044F	1	4123121010	Link
045B	1	4123271030	Holder
045F	2	51100306A9	B.H.M. Screw, B3 x 6
046B	1	4123160120	Bracket

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
046F	1	4123160092	Bracket
047F	1	51100306A9	B.H.M. Screw, B3 x 6
048F	1	4123259010	Bushing
049B	2	1210005010	Clamper
049F	1	4123259010	Bushing
051F	1	4123115030	Spring
052B	2	51280308B0	B.H. Tapped Screw, B3 x 8ST
052F	1	4123104090	Retainer
053F	2	4123104020	Spring
054F	1	51100306A9	B.H.M. Screw, B3 x 6
055B	1	5123104020	Retainer
055F	1	3397056020	Buffer
056F	1	3397056020	Buffer
057F	150	72071605A0	String
058F	1	4170053020	Cover
060F	1	3397861020	Label
062B	6	4136270012	Button
063B	1	4136107050	Sheet
064B	7	4123270010	Button
065B	1	4123270020	Button
065F	2	51280308B0	B.H. Tapped Screw, B3 x 8ST
066B	4	4123154033	Knob
066F	2	51280308B0	B.H. Tapped Screw, B3 x 8ST
067B	4	51100314S9	B.H.M. Screw, B3 x 14
067F	2	51280308B0	B.H. Tapped Screw, B3 x 8ST
068B	2	51280310U0	B.H. Tapped Screw, B3 x 10ST
069B	1	51100314S9	B.H.M. Screw, B3 x 14
069F	1	4123160070	Bracket
070B	2	51280320U0	B.H. Tapped Screw, B3 x 20ST
070F	2	51102610A0	B.H.M. Screw, B2.6 x 10
071B	2	51590306B0	B. Tapped Screw, B3 x 6ST
071F	2	51100205A0	B.H.M. Screw, B2 x 5
072B	2	51590306B0	B. Tapped Screw, B3 x 6ST
073B	3	51480308A9	F. Washer Screw
074B	1	51280308B0	B.H. Tapped Screw, B3 x 8ST
074F	1	1382005030	Clamper
075B	1	71400159Q0	Spring
075F	1	51102606S0	B.H.M. Screw, B2.6 x 6
076B	1	4183265050	Indicator
076F	2	51100306S9	B.H.M. Screw, B3 x 6
077B	1	4183265060	Indicator
077F	1	4123163010	Tray
078F	2	4123101010	Support
079F	2	51102605B0	B.H.M. Screw, B2.6 x 5
080F	1	4123160102	Bracket
081F	2	51570306B0	P. Tapped Screw, P3 x 6ST
082F	2	51100306A9	B.H.M. Screw, B3 x 6
083B	1	4182302010	Dial
083F	1	4123104040	Retainer
084B	1	4123103012	Pointer
084F	2	51570306B0	P. Tapped Screw, B3 x 6ST
085F	1	4123160080	Bracket
086B	1	51280308B0	B.H. Tapped Screw, B3 x 8ST
086F	1	51570306B0	P. Tapped Screw, P3 x 6ST
087B	2	51100308S9	B.H.M. Screw, B3 x 8
087F	2	51100306A9	B.H.M. Screw, B3 x 6
088B	1	4182265030	Indicator
088F	1	4183104010	Retainer
089B	1	62030039W0	Lug
089F	1	51442605A0	L. Washer Screw
090F	1	51102604A0	B.H.M. Screw, B2.6 x 4
091F	1	4123104072	Retainer
092F	1	51062604A0	P.H.M. Screw, P2.6 x 4
093F	2	51100306A9	B.H.M. Screw, B3 x 6
094F	2	51280308B0	B.H. Tapped Screw, B3 x 8ST
095F	1	51100306A9	B.H.M. Screw, B3 x 6
096F	1	51100306A9	B.H.M. Screw, B3 x 6
097F	2	51100210A0	B.H.M. Screw, B2 x 10
098F	1	51100306A9	B.H.M. Screw, B3 x 6
099F	1	51100306A9	B.H.M. Screw, B3 x 6
100F	1	51100306A9	B.H.M. Screw, B3 x 6
1006	1	4113105700	Chassis
1008	1	4113105710	Chassis
1009	2	64002500R0	RG Ring, "E"
101F	1	51100306A9	B.H.M. Screw, B3 x 6
1012	1	3435354200	Lever
1013	1	3435115360	Spring
1014	1	3435115212	Spring
1015	2	64002500R0	RG Ring, "E"
1018	1	4113002060	Arm
1019	1	3435123010	Contactor
102F	1	51100306A9	B.H.M. Screw, B3 x 6
1020	1	3435115220	Spring
1021	1	64000300R0	RG Ring, "E"
1022	1	3435115230	Spring
1026	1	3435115200	Spring
1027	1	3444118070	Spacer
1028	1	51440204A0	L.Washer Screw
1029	1	51100205A0	B.H.M. Screw, B2 x 5
103F	2	1382005030	Clamper
1030	1	3435005060	Clamper
104F	1	51100310A9	B.H.M. Screw, B3 x 10
105F	2	54042602A0	Spring Washer
106F	1	51102604A0	B.H.M. Screw, B2.6 x 4
107F	2	4123101010	Support
108F	2	53112603A0	Hexagon Nut
109F	2	51102605A0	B.H.M. Screw, B2.6 x 5
110F	1	3370053010	Cover
1102	1	3435160300	Bracket
1103	2	4113101030	Support
1104	1	3435005060	Clamper
1105	1	51100205A0	B.H.M. Screw, B2 x 5
1106	1	51100212A0	B.H.M. Screw, B2 x 12
1107	1	51100214A0	B.H.M. Screw, B2 x 14
1108	2	54020200E0	Flat Washer P
111F	1	51060304A9	P.H.M. Screw, P3 x 4
1111	1	3435115260	Spring
1112	1	3435115270	Spring
1113	2	61020010T0	Ball
1114	1	51062603A0	P.H.M. Screw, P2.6 x 3
1116	2	4113051020	Guide
1117	2	51062605A0	P.H.M. Screw, P2.6 x 5
1120	1	4113255500	Pinch Roller
1121	1	3435115242	Spring
1122	1	64000200R0	RG Ring, "E"
1127	1	3435106040	Sustainer
1128	3	51060205A0	P.H.M. Screw, P2 x 5
113F	1	59030810P0	Washer
114F	2	51280308B0	B.H. Tapped Screw, B3 x 8ST
115F	2	51040312A9	F.H.M. Screw, F3 x 12
116F	1	4174265020	Indicator
117F	1	3435118010	Spacer
119F	1	62030039W0	Lug
120F	1	51472606A0	L. Washer Screw
121F	1	54022601E0	Flat Washer P
126F	1	4182056010	Buffer

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
140F	1	4182104010	Retainer
141F	1	51570306B0	P. Tapped Screw, P3 x 6ST
142F	1	59030805P0	Washer
143F	1	51100306A9	B.H.M. Screw, B3 x 6
145F	1	4123107080	Sheet
146F	1	4123056030	Buffer
147F	1	4123056040	Buffer
148F	1	4182056020	Buffer
1202	1	4113004500	Table
1203	2	3435067100	Cap
1205	1	4113004510	Table
1206	1	59060902G9	Washer
1207	1	3435115610	Spring
1213	1	3435002120	Arm
1214	1	3435115290	Spring
1215	1	3435055020	Collar
1216	1	3435259020	Bushing
1217	1	51442608A0	L. Washer Screw
1223	1	4113354090	Lever
1224	1	3435115600	Spring
1228	1	4136115100	Spring
1229	1	51570305A0	P. Tapped Screw, P3 x 5ST
1302	1	3435354230	Lever
1303	1	3435115340	Spring
1307	1	3435002720	Arm
1308	1	3435115370	Spring
1312	1	3435354240	Lever
1313	1	3435115380	Spring
1317	1	3435002710	Arm
1318	1	3435115330	Spring
1319	1	3435001050	Idler
1320	1	64001500R0	RG Ring, "E"
1324	1	3435001710	Idler
1325	1	3435002130	Arm
1326	1	3435115320	Spring
1327	1	51442606A0	L. Washer Screw
1328	1	54022600E0	Flat Washer P
1329	1	3435115350	Spring
1330	1	3435055030	Collar
1402	1	3435354220	Lever
1403	1	3435115300	Spring
1404	1	51440204A0	L. Washer Screw
1406	1	3435354210	Lever
1407	2	3435259010	Bushing
1408	1	3435115280	Spring
1409	1	3435115310	Spring
1410	2	51442606A0	L. Washer Screw
1411	1	62261240W0	Lug
1415	1	3435354270	Lever
1416	1	3435115640	Spring
1417	1	3435160700	Bracket
1418	1	4123054010	Cam
1419	1	3435115630	Spring
1420	1	64002500R0	RG Ring, "E"
1421	2	51062603A0	P.H.M. Screw, P2.6 x 3
1425	1	3435354250	Lever
1426	1	3435056020	Buffer
1427	1	3435115390	Spring
1502	1	4113273500	Flywheel
1503	1	59254602G9	Washer
1504	1	3435264010	Belt
1505	1	4123104080	Retainer
1506	1	3435106010	Sustainer
1507	3	51442605A0	L. Washer Screw
1511	1	3435001700	Idler
1512	1	3435115620	Spring
1513	1	64002500R0	RG Ring, "E"
1518	1	3435002700	Arm
1519	1	3435001030	Idler
1520	2	64002500R0	RG Ring, "E"
1523	1	3435002100	Arm
1524	1	64000400R0	RG Ring, "E"
1602	1	3435354520	Lever
1603	1	3435005070	Clamper
1604	5	51442604A0	L. Washer Screw
1610	1	3435160310	Bracket
1611	5	51570305A0	P. Tapped Screw, P3 x 5ST
1616	1	4136262010	Pulley
1617	3	3435056010	Buffer
1618	3	3435055010	Collar
1619	3	51442608A0	L. Washer Screw
1620	3	54022600E0	Flat Washer P
1627	1	4123052010	Counter
1628	1	3435264020	Belt
1629	1	51060305A9	P.H.M. Screw, P3 x 5
1630	1	51040305A9	F.H.M. Screw, F3 x 5
900T	1	9560000090	Hang Tag
			ELECTRICAL PARTS
A001	1	YR06100010	Whip Antenna
C001	1	DK18503010	Capacitor, Ceramic, 0.05μF 50V
C003	1	ER40502510	Capacitor, Electrolytic, 4μF 25V Non-Poler
C004	1	ER40502510	Capacitor, Electrolytic, 4μF 25V Non-Poler
F001	1	FS10150030	Fuse 1.5A
H001	1	LH42851010	Head, Rec/Play
H002	1	LH31000400	Head, Erase
J001	1	YB00100023	Connective Cord
J002	1	YJ01000960	Jack, Headphone
J003	1	YJ01000660	Jack, External Speaker
J004	1	YJ01000660	Jack, External Speaker
J005	1	YJ06001060	Jack, 7P Spk. Connector
J006	1	YJ06001060	Jack, 7P Mecha. Connector
J007	1	YL01030150	Terminal
J008	1	YL01030150	Terminal
J010	1	YL01030210	Terminal
J011	1	YJ04000500	Jack, AC
J012	1	YJ04000550	Jack, DC
J023	1	YP10000390	Plug, Antenna
J050	1	YJ11000170	DIN Jack
J051	1	YP06000580	Plug, Terminal 5P
J052	1	YJ06001050	DIN Jack, 5P
M001	1	MM11200060	D.C Motor 12V
P050	1	YK41231220	P.W. Board, DIN (Print only)
		ZZ41828220	P.W. Board, Assembly
Q001	1	HI10003020	L.E.D. MPX
Q011	1	HI10003020	L.E.D. Power Indicater
R001	1	RT05101140	Resistor, Fixed, 100Ω ±5%, ¼W
R002	1	RT05101140	Resistor, Fixed, 100Ω ±5%, ¼W
R051	1	GD05273140	Resistor, Fixed, 27kΩ ±5%, ¼W
R052	1	GD05273140	Resistor, Fixed, 27kΩ ±5%, ¼W
R053	1	GD05333140	Resistor, Fixed, 33kΩ ±5%, ¼W

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
R054	1	GD05333140	Resistor, Fixed, 33kΩ ±5%, ¼W
R055	1	GD05103140	Resistor, Fixed, 10kΩ ±5%, ¼W
R056	1	GD05103140	Resistor, Fixed, 10kΩ ±5%, ¼W
S001	1	SM01010670	Mini-Switch
S003	1	SC01020100	Micro-Switch, Record/Play
S011	1	SP02010310	Push Switch
S012	1	SC02020230	Lever Switch
S013	1	SS02020480	Slide Switch (110V/220V)
T011	1	TS15404030	Power Transformer
V011	1	IN10140030	Lamp
V012	1	IN10140030	Lamp
Z003	1	QK01603012	Speaker, 6Ω
Z004	1	QK01603012	Speaker, 6Ω
Z005	1	QK00403010	Speaker, 4Ω, Tweeter
Z006	1	QK00403010	Speaker, 4Ω, Tweeter
C101	1	DD12100010	Capacitor, Ceramic, 10PF±1PF
C102	1	DK17102010	Capacitor, Ceramic, 0.001μF±20%
C103	1	EA47503590	Capacitor, Electrolytic, 4.7μF+100, 0%
C104	1	DK18203030	Capacitor, Ceramic, 0.02μF+80%, -20%
C105	1	DD16150030	Capacitor, Ceramic, 15PF±10%
C106	1	DD16501010	Capacitor, Ceramic, 500PF±10%
C107	1	DD12100010	Capacitor, Ceramic, 10±1PF
C108	1	DD11050020	Capacitor, Ceramic, 5±0.05PF
C109	1	DK18203030	Capacitor, Ceramic, 0.02μF+80, -20%
C110	1	DK17502010	Capacitor, Ceramic, 0.005μF±20%
C111	1	DD15500070	Capacitor, Ceramic, 50PF±5%
C112	1	DD16151010	Capacitor, Ceramic, 150PF±10%
C113	1	DK17102010	Capacitor, Ceramic, 0.001μF±20%
C114	1	DD15400040	Capacitor, Ceramic, 40PF±5%
C115	1	DD11030010	Capacitor, Ceramic, 3PF±0.5PF
C116	1	DD11030010	Capacitor, Ceramic, 3PF±0.05PF
C117	1	DK17502010	Capacitor, Ceramic, 0.005μF±20%
C118	1	DK18203030	Capacitor, Ceramic, 0.02μF+80, -20%
C119	1	DD16150030	Capacitor, Ceramic, 15PF±1PF
C120	1	DK18403020	Capacitor, Ceramic, 0.04μF+80, -20%
C121	1	DK18403020	Capacitor, Ceramic, 0.04μF+80, -20%
C122	1	EA47503590	Capacitor, Electrolytic, 4.7μF+100, 0%
C123	1	EA22701090	Capacitor, Electrolytic, 220μF+100, 0%
C124	1	DK18203030	Capacitor, Ceramic, 0.02μF+80, -20%
C125	1	DK18203030	Capacitor, Ceramic, 0.02μF+80, -20%
C126	1	DD16150030	Capacitor, Ceramic, 15PF±10%
C127	1	DK17502010	Capacitor, Ceramic, 0.005μF±20%
C128	1	DK18203030	Capacitor, Ceramic, 0.02μF+80, -20%
C129	1	DK18203030	Capacitor, Ceramic, 0.02μF+80, -20%
C130	1	DD16300010	Capacitor, Ceramic, 30PF±10%
C131	1	DK18203030	Capacitor, Ceramic, 0.02μF+80, -20%
C132	1	DF16223010	Capacitor, Film, 0.022μF±10%
C133	1	DK17502010	Capacitor, Ceramic, 0.005μF±20%
C134	1	DK17102010	Capacitor, Ceramic, 0.001μF±20%
C135	1	DK18203030	Capacitor, Ceramic, 0.02μF+80, -20%
C136	1	DD15301020	Capacitor, Ceramic, 300PF±5%
C137	1	DK18403020	Capacitor, Ceramic, 0.04μF+80, -20%
C138	1	DK18403020	Capacitor, Ceramic, 0.04μF+80, -20%
C139	1	DF17403020	Capacitor, Film, 0.04μF±20%
C140	1	DK18403020	Capacitor, Ceramic, 0.04μF+80, -20%
C141	1	DK18203030	Capacitor, Ceramic, 0.02μF+80, -20%
C142	1	DK18103010	Capacitor, Ceramic, 0.01μF+80, -20%
C143	1	DK18403020	Capacitor, Ceramic, 0.04μF+80, -20%
C144	1	EA10801090	Capacitor,.Electrolytic, 1000μF+100, 0%

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
C145	1	DD15301020	Capacitor, Ceramic, 300pF±5%
C146	1	DD16201010	Capacitor, Ceramic, 200pF±10%
C147	1	DD16201010	Capacitor, Ceramic, 200pF±10%
C148	1	EA47503590	Capacitor, Electrolytic, 4.7μF+100,0%
C149	1	DF17333010	Capacitor, Film, 5±0.5PF
C150	1	EA47503590	Capacitor, Electrolytic, 4.7μF+100,0%
C151	1	DD11030010	Capacitor, Ceramic, 3PF
C152	1	CP22400180	Capacitor, Variable
C153	1	DD11030010	Capacitor, Ceramic, 3PF
C154	1	DF16472010	Capacitor, Film, 0.0047μF±10%
C155	1	DK17102010	Capacitor, Ceramic, 0.01μF+80, -20%
C156	1	DF65301010	Capacitor, Film, 300pF±5%
C157	1	DD12050010	Capacitor, Ceramic, 5pF±1PF
C158	1	CT11450010	Capacitor, Trimming
C159	1	CT11450010	Capacitor, Trimming
C160	1	DF17562010	Capacitor, Film, 0.0056μF±20%
C161	1	DF65322010	Capacitor, Film, 0.0032μF±5%
C162	1	DF16103010	Capacitor, Film, 0.01μF±10%
C163	1	DK17502010	Capacitor, Ceramic, 0.005μF±20%
C164	1	DK18403020	Capacitor, Ceramic, 0.04μF+80, -20%
C165	1	DK18403020	Capacitor, Ceramic, 0.04μF+80, -20%
C166	1	EA10601690	Capacitor, Electrolytic, 10μF+100,0%
C167	1	DD11020010	Capacitor, Ceramic, 2pF±0.05pF
C168	1	EA33601090	Capacitor, Electrolytic, 33μF+100,0%
C169	1	DK18403020	Capacitor, Ceramic, 0.04μF+80, -20%
C170	1	DK18203030	Capacitor, Ceramic, 0.02μF+80, -20%
C171	1	DF17403010	Capacitor, Film, 0.04μF±20%
C172	1	DF16103010	Capacitor, Film, 0.01μF±10%
C173	1	DF17153010	Capacitor, Film, 0.015μF±20%
C174	1	EA22700690	Capacitor, Electrolytic, 220μF+100,0%
C175	1	DF17223010	Capacitor, Film, 0.022μF±20%
C176	1	DK17102010	Capacitor, Ceramic, 0.001μF±20%
C177	1	EA10701090	Capacitor, Electrolytic, 100μF+100,0%
C178	1	DF16152010	Capacitor, Film, 0.0015μF±10%
C179	1	DF16103010	Capacitor, Film, 0.01μF±10%
C180	1	DF65102010	Capacitor, Film, 0.001μF±5%
C181	1	EA10601690	Capacitor, Electrolytic, 10μF+100,0%
C182	1	DF16152010	Capacitor, Film, 0.0015μF±10%
C183	1	DF16152010	Capacitor, Film, 0.0015μF±10%
C184	1	EM10402510	Capacitor, Electrolytic, 0.1μF±20%
C185	1	EM10402510	Capacitor, Electrolytic, 0.1μF±20%
C186	1	DF65322010	Capacitor, Film, 0.0032μF±5%
C187	1	DF65322010	Capacitor, Film, 0.0032μF±5%
C188	1	DF16682010	Capacitor, Film, 0.0068μF±10%
C189	1	DF16682010	Capacitor, Film, 0.0068μF±10%
C190	1	DF16822010	Capacitor, Film, 0.0068μF±10%
C191	1	DF16822010	Capacitor, Film, 0.0068μF±10%
C192	1	DD12100060	Capacitor, Ceramic, 10pF±1pF
C193	1	DD11030010	Capacitor, Ceramic, 3pF±1pF
C194	1	DD16501010	Capacitor, Ceramic, 500pF±10%
C195	1	DF17273010	Capacitor, Film, 0.027μF±20%
C196	1	DK18103010	Capacitor, Ceramic, 0.01μF+80, -20%
C197	1	DD15250020	Capacitor, Ceramic, 25pF+100,0%
C198	1	DD16201010	Capacitor, Ceramic, 200pF±10%
F101	1	FF39800010	Filter, LC, B.P.F. 88/108MHz
F102	1	FF11070050	Filter, Ceramic, 10.7MHz
F103	1	FF11070050	Filter, Ceramic, 10.7MHz
J101	1	BY01120010	Jack Board
L102	1	LA70178060	Coil, Antenna, FM
L103	1	LC16810010	Coil, Choke, FM

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
L104	1	LI70018010	IFT, FM
L106	1	LA70238010	Coil, Antenna, FM
L107	1	LC11030030	Coil, Choke, AM
L108	1	LI71016040	IFT, FM
L109	1	LI71010030	IFT, FM
L110	1	LI70138010	IFT, FM
L111	1	LI70018020	IFT, FM
L112	1	LF11400880	Coil, Antenna, MW/SW
L113	1	LO71010010	Coil, OSC, MW
L114	1	LO71010042	Coil, OSC, SW
L115	1	LI70033020	IFT, AM
L116	1	FF10045140	Filter, Ceramic, AM IFT
L117	1	LS10290020	Coil, MPX, FM, 19KHz
L118	1	LS10290010	Coil, MPX, FM, 38KHz
L119	1	LC22260010	Coil, Choke, FM MPX
L120	1	LC22260010	Coil, Choke, FM MPX
P100	1	YK41231210	P.W. Board Main
	1	ZZ41821210	P.W. Board Assembly
Q101	1	HT310471C0	Transistor, 2SC1047(C), FM RF
Q102	1	HT310471B0	Transistor, 2SC1047(B), FM Mix
Q103	1	HT313591B0	Transistor, 2SC1359(B), FM OSC
Q104	1	HT308291B0	Transistor, 2SC829(B), FM IF-1
Q105	1	HT308291C0	Transistor, 2SC829(C), FM IF-2
Q106	1	HT308291B0	Transistor, 2SC829(B), FM IF-3
Q107	1	HT308291B0	Transistor, 2SC829(B), FM IF-4, MW–SW IF-2
Q108	1	HT308291C0	Transistor, 2SC829(C), FM IF-5
Q109	1	HT308291B0	Transistor, 2SC829(B), MW–SW Conv
Q110	1	HT308291C0	Transistor, 2SC829(C), MW–SW IF-1
Q111	1	HC10012030	IC, LA-3301, FM MPX
Q112	1	HD20011050	Diode, IS1555
Q113	1	HD20011050	Diode, IS1555, FM AGC
Q114	1	HD20011050	Diode, IS1555, FM OSC Comp
Q115	1	HD40009090	Varicap, IS2688, FM AFC
Q116	1	HD10001050	Diode, IN60, FM AGC
Q117	1	HD10001050	Diode, IN60, FM AGC
Q118	1	HD20011050	Diode, IS1555, FM AGC
Q119	1	HD30019090	Diode, Zener, BZ-071
Q120	1	HD10003020	Diode, 20A90, FM DET
Q121	1	HD10003020	Diode, 20A90, FM DET
Q122	1	HD10001050	Diode, IN60, AM OSC Comp
Q123	1	HD10001050	Diode, IN60, AM AGC
Q124	1	HD10001050	Diode, IN60, AM AGC
Q125	1	HD10001050	Diode, IN60, AM DET
Q126	1	HD10001050	Diode, IN60, AM Meter
Q127	1	HD10001050	Diode, IN60, AM Meter
Q128	1	HD20001210	Diode, IS2473, AM AGC
Q129	1	HT308281C0	Transistor, 2SC828(R), FM Auto Stereo
R101	1	GD05222140	Resistor, 2.2KΩ±5%, 1/4W
R102	1	GD05683140	Resistor, 68KΩ±5%, 1/4W
R103	1	GD05222140	Resistor, Fixed, 2.2Ω±5%, 1/4W
R104	1	GD05561140	Resistor, Fixed, 560Ω±5%, 1/4W
R105	1	GD05330140	Resistor, Fixed, 33Ω±5%, 1/4W
R106	1	GD05330140	Resistor, Fixed, 33Ω±5%, 1/4W
R107	1	GD05223140	Resistor, Fixed, 22KΩ±5%, 1/4W
R108	1	GD05682140	Resistor, Fixed, 6.8KΩ±5%, 1/4W
R109	1	GD05152140	Resistor, Fixed, 1.5KΩ±5%, 1/4W
R110	1	GD05100140	Resistor, Fixed, 10Ω±5%, 1/4W

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
R111	1	GD05103140	Resistor, Fixed, 10KΩ±5%, 1/4W
R112	1	GD05103140	Resistor, Fixed, 10KΩ±5%, 1/4W
R113	1	GD05562140	Resistor, Fixed, 5.6KΩ±5%, 1/4W
R114	1	GD05332140	Resistor, Fixed, 3.3KΩ±5%, 1/4W
R115	1	GD05331140	Resistor, Fixed, 330Ω±5%, 1/4W
R116	1	GD05103140	Resistor, Fixed, 10KΩ±5%, 1/4W
R117	1	GD05103140	Resistor, Fixed, 10KΩ±5%, 1/4W
R118	1	GD05334140	Resistor, Fixed, 330KΩ±5%, 1/4W
R119	1	GD05680140	Resistor, Fixed, 68Ω±5%, 1/4W
R120	1	GD05561140	Resistor, Fixed, 560Ω±5%, 1/4W
R121	1	GD05101140	Resistor, Fixed, 100Ω±5%, 1/4W
R122	1	GD05332140	Resistor, Fixed, 3.3KΩ±5%, 1/4W
R123	1	GD05561140	Resistor, Fixed, 560Ω±5%, 1/4W
R124	1	GD05472140	Resistor, Fixed, 4.7KΩ±5%, 1/4W
R125	1	GD05561140	Resistor, Fixed, 560Ω±5%, 1/4W
R126	1	GD05102140	Resistor, Fixed, 1KΩ±5%, 1/4W
R127	1	GD05105140	Resistor, Fixed, 1MΩ±5%, 1/4W
R128	1	GD05561140	Resistor, Fixed, 560Ω±5%, 1/4W
R129	1	GD05102140	Resistor, Fixed, 1KΩ±5%, 1/4W
R130	1	GD05561140	Resistor, Fixed, 560Ω±5%, 1/4W
R131	1	GD05272140	Resistor, Fixed, 2.7KΩ±5%, 1/4W
R132	1	GD05561140	Resistor, Fixed, 560Ω±5%, 1/4W
R133	1	GD05102140	Resistor, Fixed, 1KΩ±5%, 1/4W
R134	1	GD05562140	Resistor, Fixed, 5.6KΩ±5%, 1/4W
R135	1	GD05153140	Resistor, Fixed, 15KΩ±5%, 1/4W
R136	1	GD05471140	Resistor, Fixed, 470Ω±5%, 1/4W
R137	1	GD05561140	Resistor, Fixed, 560Ω±5%, 1/4W
R138	1	GD05470140	Resistor, Fixed, 47Ω±5%, 1/4W
R139	1	GD05101140	Resistor, Fixed, 100Ω±5%, 1/4W
R140	1	GD05101140	Resistor, Fixed, 100Ω±5%, 1/4W
R141	1	GD05334140	Resistor, Fixed, 330KΩ±5%, 1/4W
R142	1	GD05821140	Resistor, Fixed, 820Ω±5%, 1/4W
R143	1	GD05471140	Resistor, Fixed, 470Ω±5%, 1/4W
R144	1	GD05101140	Resistor, Fixed, 100Ω±5%, 1/4W
R145	1	GD05472140	Resistor, Fixed, 4.7KΩ±5%, 1/4W
R146	1	GD05104140	Resistor, Fixed, 100KΩ±5%, 1/4W
R147	1	GJ05101010	Resistor, Fixed, 100Ω±5%, 1W
R148	1	GD05102140	Resistor, Fixed, 1KΩ±5%, 1/4W
R149	1	GD05152140	Resistor, Fixed, 1.5KΩ±5%, 1/4W
R150	1	GD05562140	Resistor, Fixed, 5.6KΩ±5%, 1/4W
R151	1	GD05562140	Resistor, Fixed, 5.6KΩ±5%, 1/4W
R152	1	GD05222140	Resistor, Fixed, 2.2KΩ±5%, 1/4W
R153	1	GD05221140	Resistor, Fixed, 220Ω±5%, 1/4W
R154	1	GD05153140	Resistor, Fixed, 15KΩ±5%, 1/4W
R155	1	GD05472140	Resistor, Fixed, 4.7KΩ±5%, 1/4W
R156	1	GD05222140	Resistor, Fixed, 2.2KΩ±5%, 1/4W
R157	1	GD05104140	Resistor, Fixed, 100KΩ±5%, 1/4W
R158	1	GD05332140	Resistor, Fixed, 3.3KΩ±5%, 1/4W
R159	1	GD05274140	Resistor, Fixed, 270KΩ±5%, 1/4W
R160	1	GD05393140	Resistor, Fixed, 39KΩ±5%, 1/4W
R161	1	GD05471140	Resistor, Fixed, 470Ω±5%, 1/4W
R162	1	GD05101140	Resistor, Fixed, 100Ω±5%, 1/4W
R163	1	GD05682140	Resistor, Fixed, 6.8KΩ±5%, 1/4W
R164	1	GD05561140	Resistor, Fixed, 560Ω±5%, 1/4W
R165	1	GD05221140	Resistor, Fixed, 220Ω±5%, 1/4W
R166	1	GD05102140	Resistor, Fixed, 1KΩ±5%, 1/4W
R167	1	GD05822140	Resistor, Fixed, 8.2KΩ±5%, 1/4W
R169	1	GD05821140	Resistor, Fixed, 820Ω±5%, 1/4W
R170	1	GD05471140	Resistor, Fixed, 470Ω±5%, 1/4W
R171	1	GD05334140	Resistor, Fixed, 330KΩ±5%, 1/4W

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
R172	1	GD05471140	Resistor, Fixed, 470Ω±5%, 1/4W
R173	1	GD05472140	Resistor, Fixed, 4.7KΩ±5%, 1/4W
R174	1	RA01020110	Resistor, Trimmer, 1KΩ
R175	1	GD05470140	Resistor, Fixed, 47Ω±5%, 1/4W
R176	1	GD05332140	Resistor, Fixed, 3.3KΩ±5%, 1/4W
R177	1	GD05332140	Resistor, Fixed, 3.3KΩ±5%, 1/4W
R178	1	GD05333140	Resistor, Fixed, 33KΩ±5%, 1/4W
R179	1	GD05333140	Resistor, Fixed, 33KΩ±5%, 1/4W
R180	1	GD05103140	Resistor, Fixed, 10KΩ±5%, 1/4W
R181	1	GD05221140	Resistor, Fixed, 220Ω±5%, 1/4W
R182	1	GD05221140	Resistor, Fixed, 220Ω±5%, 1/4W
S101	1	SP06070020	Pushswitch
S102	1	SS12020060	Slide Switch
C201	1	EM22402510	Capacitor, Electrolytic, 0.22μF, 25V
C202	1	DF16333010	Capacitor, Film, 0.033μF±10%, 50V
C203	1	EA10601690	Capacitor, Electrolytic, 10μF, 16V
C204	1	EA47503590	Capacitor, Electrolytic, 4.7μF, 35V
C205	1	DF56561500	Capacitor, Film, 560PF ±5%, 125V
C206	1	EA22701690	Capacitor, Electrolytic, 220μF, 16V
C207	1	DD16201010	Capacitor, Ceramic, 200pF±10%, 50V
C208	1	DD16101010	Capacitor, Ceramic, 100pF±10%, 50V
C209	1	EA10505090	Capacitor, Electrolytic, 1μF, 50V
C210	1	EA10601690	Capacitor, Electrolytic, 10μF, 16V
C211	1	DD16501010	Capacitor, Ceramic, 500pF±10%, 50V
C212	1	DF16223010	Capacitor, Film, 0.022μF±10%, 50V
C213	1	EA22701690	Capacitor, Electrolytic, 220μF, 16V
C214	1	EA10505090	Capacitor, Electrolytic, 1μF, 50V
C215	1	EA10601690	Capacitor, Electrolytic, 10μF, 16V
C216	1	EA33601090	Capacitor, Electrolytic, 33μF, 10V
C217	1	EA47503590	Capacitor, Electrolytic, 4.7μF, 35V
C218	1	DF16122010	Capacitor, Film, 0.0012μF±10%, 50V
C220	1	EA47701690	Capacitor, Electrolytic, 470μF, 16V
C221	1	EA10701690	Capacitor, Electrolytic, 100μF
C222	1	EA47601090	Capacitor, Electrolytic, 47μF
C223	1	EA47601090	Capacitor, Electrolytic, 47μF
C224	1	DF65681010	Capacitor, Film, 680pF
C225	1	DD16500010	Capacitor, Ceramic, 50pF
C226	1	DD16500010	Capacitor, Ceramic, 50pF
C227	1	EA10701090	Capacitor, Electrolytic, 100μF
C228	1	EA33601690	Capacitor, Electrolytic, 33μF
C229	1	DF16332010	Capacitor, Film, 0.0033μF
C230	1	EM10402510	Capacitor, Electrolytic, 0.1μF
C231	1	EM10402510	Capacitor, Electrolytic, 0.1μF, 25V
C232	1	DD16501010	Capacitor, Ceramic, 500pF±10%, 50V
C233	1	DD16201010	Capacitor, Ceramic, 200pF±10%, 50V
C234	1	EA10505090	Capacitor, Electrolytic, 1μF, 50V
C235	1	DF16563010	Capacitor, Film, 0.056μF±10%, 50V
C236	1	EA10701690	Capacitor, Electrolytic, 100μF, 16V
C237	1	DF16333010	Capacitor, Film, 0.033μF±10%, 50V
C238	1	DD16501010	Capacitor, Ceramic, 500pF±10%,50V
C239	1	EA10601690	Capacitor, Electrolytic, 10μF, 16V
C240	1	DD16501010	Capacitor, Ceramic, 500pF±10%,50V
C241	1	DK18103010	Capacitor, Ceramic, 0.01μF±10%, 50V
J201 ~ J281	81	YP10001130	Plug
L201	1	LC25650010	Coil, Choke, 5.6mH
Q201	1	HT313271U0	Transistor, 2SC1327(U)
Q202	1	HT313272A0	Transistor, 2SC1327(S,T)
Q203	1	HT313831X0	Transistor, 2SC1383(X)

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
Q204	1	HT308282A0	Transistor, 2SC828(R,S)
Q205	1	HT313272A0	Transistor, 2SC1327(S,T)
Q206	1	HT313271U0	Transistor, 2SC1327(U)
Q207	1	HT308282A0	Transistor, 2SC828(R,S)
Q208	1	HT308282A0	Transistor, 2SC828(R,S)
Q209	1	HD20002060	Diode, 1S1212
Q210	1	HD20002060	Diode, 1S1212
Q211	1	HD20002060	Diode, 1S1212
R201	1	GD05332140	Resistor, Fixed, 3.3KΩ±5%, 1/4W
R202	1	GD05222140	Resistor, Fixed, 2.2KΩ±5%, 1/4W
R203	1	GD05100140	Resistor, Fixed, 10Ω±5%, 1/4W
R204	1	GD05562140	Resistor, Fixed, 5.6KΩ±5%, 1/4W
R205	1	GD05102140	Resistor, Fixed, 1KΩ±5%, 1/4W
R206	1	GD05683140	Resistor, Fixed, 68KΩ±5%, 1/4W
R207	1	GD05271140	Resistor, Fixed, 270Ω±5%, 1/4W
R208	1	GD05104140	Resistor, Fixed, 100KΩ±5%, 1/4W
R209	1	GD05683140	Resistor, Fixed, 68KΩ±5%, 1/4W
R210	1	GD05822140	Resistor, Fixed, 8.2KΩ±5%, 1/4W
R211	1	GD05101140	Resistor, Fixed, 100Ω±5%, 1/4W
R212	1	GD05102140	Resistor, Fixed, 1KΩ±5%, 1/4W
R213	1	GD05823140	Resistor, Fixed, 82KΩ±5%, 1/4W
R214	1	GD05682140	Resistor, Fixed, 6.8KΩ±5%, 1/4W
R215	1	GD05472140	Resistor, Fixed, 4.7KΩ±5%, 1/4W
R216	1	GD05822140	Resistor, Fixed, 8.2KΩ±5%, 1/4W
R217	1	RA01030180	Resistor, Trimmer, 10KΩ
R218	1	GD05563140	Resistor, Fixed, 56KΩ±5%, 1/4W
R219	1	GD05102140	Resistor, Fixed, 1KΩ±5%, 1/4W
R220	1	GD05332140	Resistor, Fixed, 3.3KΩ±5%, 1/4W
R221	1	RA05030060	Resistor, Trimmer, 50KΩ
R223	1	GD05124140	Resistor, Fixed, 120KΩ±5%, 1/4W
R225	1	GD05473140	Resistor, Fixed, 47KΩ±5%, 1/4W
R226	1	GD05184140	Resistor, Fixed, 180KΩ±5%, 1/4W
R227	1	GD05393140	Resistor, Fixed, 39KΩ±5%, 1/4W
R228	1	GD05123140	Resistor, Fixed, 12KΩ±5%, 1/4W
R229	1	GD05331140	Resistor, Fixed, 330Ω±5%, 1/4W
R230	1	GD05683140	Resistor, Fixed, 68KΩ±5%, 1/4W
R231	1	GD05103140	Resistor, Fixed, 10KΩ±5%, 1/4W
R232	1	GD05182140	Resistor, Fixed, 1.8KΩ±5%, 1/4W
R233	1	GD05101140	Resistor, Fixed, 100Ω±5%, 1/4W
R234	1	GD05683140	Resistor, Fixed, 68KΩ±5%, 1/4W
R235	1	GD05104140	Resistor, Fixed, 100KΩ±5%, 1/4W
R236	1	GD0522140	Resistor, Fixed, 2.2KΩ±5%, 1/4W
R237	1	GD05182140	Resistor, Fixed, 1.8KΩ±5%, 1/4W
R238	1	GD05103140	Resistor, Fixed, 10KΩ±5%, 1/4W
R239	1	GD05183140	Resistor, Fixed, 18KΩ±5%, 1/4W
R240	1	GD05562140	Resistor, Fixed, 5.6KΩ±5%, 1/4W
R241	1	GD05562140	Resistor, Fixed, 5.6KΩ±5%, 1/4W
R242	1	GD05682140	Resistor, Fixed, 6.8KΩ±5%, 1/4W
R243	1	GD05221140	Resistor, Fixed, 220Ω±5%, 1/4W
R244	1	GD05274140	Resistor, Fixed, 270KΩ±5%, 1/4W
R245	1	GD05102140	Resistor, Fixed, 1KΩ±5%, 1/4W
R246	1	GD05561140	Resistor, Fixed, 560Ω±5%, 1/4W
R247	1	GD05562140	Resistor, Fixed, 5.6KΩ±5%, 1/4W
R248	1	GD05681140	Resistor, Fixed, 680Ω±5%, 1/4W
R249	1	GD05332140	Resistor, Fixed, 3.3KΩ±5%, 1/4W
R250	1	GD05332140	Resistor, Fixed, 3.3KΩ±5%, 1/4W
R251	1	GD05823140	Resistor, Fixed, 82KΩ±5%, 1/4W
R252	1	GD05562140	Resistor, Fixed, 5.6KΩ±5%, 1/4W
R253	1	GD05471140	Resistor, Fixed, 470Ω±5%, 1/4W
R254	1	GD05222140	Resistor, Fixed, 2.2KΩ±5%, 1/4W

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
T201	1	TO12501012	Output Transformer
C301	1	EM22402510	Capacitor, Electrolytic, 0.22µF, 25V
C302	1	DF16333010	Capacitor, Film, 0.033µF±10%, 50V
C303	1	EA10601690	Capacitor, Electrolytic, 10µF, 16V
C304	1	EA47503590	Capacitor, Electrolytic, 4.7µF, 35V
C305	1	DF56561500	Capacitor, Film, 560pF±5%, 125V
C307	1	DD16201010	Capacitor, Ceramic, 200pF±10%, 50V
C308	1	DD16101010	Capacitor, Ceramic, 100pF±10%, 50V
C309	1	EA10505090	Capacitor, Electrolytic, 1µF, 50V
C310	1	EA10601690	Capacitor, Electrolytic, 10µF, 16V
C311	1	DD16501010	Capacitor, Ceramic, 500pF±10%, 50V
C312	1	DF16223010	Capacitor, Film, 0.02µF±10%, 50V
C313	1	EA22701690	Capacitor, Electrolytic, 220µF, 16V
C314	1	EA10505090	Capacitor, Electrolytic, 1µF, 50V
C315	1	EA10601690	Capacitor, Electrolytic, 10µF, 16V
C317	1	EA10801690	Capacitor, Electrolytic, 1000µF, 16V
C318	1	DF16122010	Capacitor, Film, 0.0012µF±10%, 50V
C320	1	EA47701690	Capacitor, Electrolytic, 470µF, 16V
C321	1	EA10701690	Capacitor, Electrolytic, 100µF
C322	1	EA47601090	Capacitor, Electrolytic, 47µF
C323	1	EA47601090	Capacitor, Electrolytic, 47µF
C324	1	DF65681010	Capacitor, Film, 680pF
C325	1	DD16500010	Capacitor, Ceramic, 50pF
C326	1	DD16500010	Capacitor, Ceramic, 50pF
C327	1	EA10701090	Capacitor, Electrolytic, 100µF
C328	1	EA33601690	Capacitor, Electrolytic, 33µF
C329	1	DF16332010	Capacitor, Film, 0.0033µF
C330	1	EM10402510	Capacitor, Electrolytic, 0.1µF
C331	1	EM10402510	Capacitor, Electrolytic, 0.1µF, 25V
C332	1	DD16501010	Capacitor, Ceramic, 500pF±10%, 50V
C333	1	DD16201010	Capacitor, Ceramic, 200pF±10%, 50V
C334	1	EA10505090	Capacitor, Electrolytic, 1µF, 50V
C335	1	DF16563010	Capacitor, Film, 0.056µF±10%, 50V
C336	1	EA10701690	Capacitor, Electrolytic, 100µF, 16V
C337	1	DF16333010	Capacitor, Film, 0.033µF±10%, 50V
C338	1	DD16501010	Capacitor, Ceramic, 500pF±10%, 50V
C339	1	EA47701690	Capacitor, Electrolytic, 470µF, 16V
C340	1	DD16501010	Capacitor, Ceramic, 500pF±10%, 50V
J302	1	YJ06001050	Jack
J303	1	YJ06001060	Jack
J304	1	YJ06001070	Jack
J305	1	YJ06001050	Jack
L301	1	LC25650010	Coil, Choke, 5.6mH
Q301	1	HT313271U0	Transistor, 2SC1327(U)
Q302	1	HT313272A0	Transistor, 2SC1327(S, T)
Q303	1	HT313831X0	Transistor, 2SC1383(X)
Q304	1	HT308282A0	Transistor, 2SC828 (R, S)
Q305	1	HT313272A0	Transistor, 2SC1327(S, T)
Q306	1	HT313271U0	Transistor, 2SC1327(U)
Q308	1	HT308282A0	Transistor, 2SC828(R, S)
Q309	1	HD20002060	Diode, 1S1212
Q311	1	HD20002060	Diode, 1S1212
R301	1	GD05332140	Resistor, Fixed, 3.3KΩ±5%, 1/4W
R302	1	GD05222140	Resistor, Fixed, 2.2KΩ±5%, 1/4W
R303	1	GD05100140	Resistor, Fixed, 10Ω±5%, 1/4W
R304	1	GD05562140	Resistor, Fixed, 5.6KΩ±5%, 1/4W
R305	1	GD05102140	Resistor, Fixed, 1KΩ±5%, 1/4W
R306	1	GD05683140	Resistor, Fixed, 68KΩ±5%, 1/4W
R307	1	GD05271140	Resistor, Fixed, 270Ω±5%, 1/4W
R308	1	GD05104140	Resistor, Fixed, 100KΩ±5%, 1/4W

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
R309	1	GD05683140	Resistor, Fixed, 68KΩ±5%, 1/4W
R310	1	GD05822140	Resistor, Fixed, 8.2KΩ±5%, 1/4W
R311	1	GD05101140	Resistor, Fixed, 100Ω±5%, 1/4W
R312	1	GD05102140	Resistor, Fixed, 1KΩ±5%, 1/4W
R313	1	GD05823140	Resistor, Fixed, 82KΩ±5%, 1/4W
R314	1	RA02030030	Resistor, Fixed, 6.8KΩ±5%, 1/4W
R315	1	GD05472140	Resistor, Fixed, 4.7KΩ±5%, 1/4W
R316	1	GD05822140	Resistor, Fixed, 8.2KΩ±5%, 1/4W
R317	1	GD05392140	Resistor, Fixed, 3.9KΩ±5%, 1/4W
R318	1	GD05563140	Resistor, Fixed, 56KΩ±5%, 1/4W
R319	1	GD05102140	Resistor, Fixed, 1KΩ±5%, 1/4W
R320	1	GD05101140	Resistor, Fixed, 100Ω±5%, 1/4W
R321	1	GD05333140	Resistor, Fixed, 33KΩ±5%, 1/4W
R323	1	GD05124140	Resistor, Fixed, 120KΩ±5%, 1/4W
R327	1	GD05393140	Resistor, Fixed, 39KΩ±5%, 1/4W
R328	1	GD05123140	Resister, Fixed, 12KΩ±5%, 1/4W
R329	1	GD05331140	Resistor, Fixed, 330Ω±5%, 1/4W
R330	1	GD05683140	Resistor, Fixed, 68KΩ±5%, 1/4W
R331	1	GD05103140	Resistor, Fixed, 10KΩ±5%, 1/4W
R332	1	GD05182140	Resistor, Fixed, 1.8KΩ±5%, 1/4W
R333	1	GD05101140	Resistor, Fixed, 100Ω±5%, 1/4W
R334	1	GD05683140	Resistor, Fixed, 68KΩ±5%, 1/4W
R335	1	GD05104140	Resistor, Fixed, 100KΩ±5%, 1/4W
R336	1	GD05560140	Resistor, Fixed, 56Ω±5%, 1/4W
R337	1	GD05182140	Resistor, Fixed, 1.8KΩ±5%, 1/4W
R338	1	GD05103140	Resistor, Fixed, 10KΩ±5%, 1/4W
R339	1	GD05183140	Resistor, Fixed, 18KΩ±5%, 1/4W
R341	1	GD05562140	Resistor, Fixed, 5.6KΩ±5%, 1/4W
R342	1	GD05682140	Resistor, Fixed, 6.8KΩ±5%, 1/4W
R343	1	GD05221140	Resistor, Fixed, 220Ω±5%, 1/4W
R344	1	GD05274140	Resistor, Fixed, 270KΩ±5%, 1/4W
R345	1	GD05102140	Resistor, Fixed, 1KΩ±5%, 1/4W
R346	1	GD05561140	Resistor, Fixed, 560Ω±5%, 1/4W
R347	1	GD05562140	Resistor, Fixed, 5.6KΩ±5%, 1/4W
R348	1	GD05681140	Resistor, Fixed, 680Ω±5%, 1/4W
R349	1	GD05332140	Resistor, Fixed, 3.3KΩ±5%, 1/4W
R350	1	GD05332140	Resistor, Fixed, 3.3KΩ±5%, 1/4W
R351	1	GD05823140	Resistor, Fixed, 82KΩ±5%, 1/4W
R352	1	GD05562140	Resistor, Fixed, 5.6KΩ±5%, 1/4W
R354	1	GD05222140	Resistor, Fixed, 2.2KΩ±5%, 1/4W
T301	1	TO12501012	Output Transformer
C401	1	EA33502590	Capacitor, Electrolytic, 3.3µF, 25V
C402	1	EA33502590	Capacitor, Electrolytic, 3.3µF, 25V
C403	1	DF16103010	Capacitor, Film, 0.01µF±10%, 50V
C404	1	DF16103010	Capacitor, Film, 0.01µF±10%, 50V
C405	1	EA47602590	Capacitor, Electrolytic, 470µF, 25V
C406	1	EA47602590	Capacitor, Electrolytic, 470µF, 25V
C407	1	EA10601690	Capacitor, Electrolytic, 10µF, 16V
C408	1	EA10601690	Capacitor, Electrolytic, 10µF, 16V
C409	1	EA10701090	Capacitor, Electrolytic, 100µF, 10V
C410	1	EA10701090	Capacitor, Electrolytic, 100µF, 10V
C411	1	DF16103010	Capacitor, Film, 0.01µF±10%, 50V
C412	1	DF16103010	Capacitor, Film, 0.01µF±10%, 50V
C413	1	DF16683010	Capacitor, Film, 0.068µF±10%, 50V
C414	1	DF16683010	Capacitor, Film, 0.068µF±10%, 50V
C415	1	EA47601090	Capacitor, Electrolytic, 47µF, 10V
C416	1	EA47601090	Capacitor, Electrolytic, 47µF, 10V
C417	1	DD16201010	Capacitor, Ceramic, 200pF±10%, 50V
C418	1	DD16201010	Capacitor, Ceramic, 200pF±10%, 50V
C419	1	EA47701690	Capacitor, Electrolytic, 470µF, 16V

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
C422	1	DF66181500	Capacitor, Film, 180pF±10%, 125V
C423	1	DF65331500	Capacitor, Film, 330pF±5%, 125V
C424	1	DF65331500	Capacitor, Film, 330pF±5%, 125V
C425	1	DF16103010	Capacitor, Film, 0.01μF±10%, 50V
C426	1	DF16472010	Capacitor, Film, 0.0047μF±10%, 50V
C427	1	DF16103010	Capacitor, Film, 0.015μF±10%, 50V
C428	1	EA10701690	Capacitor, Electrolytic, 100μF, 16V
C429	1	DK18503010	Capacitor, Ceramic, 0.05μF, 50V
C430	1	DF16152510	Capacitor, Film, 0.0015μF±10%, 200V
C431	1	DF16152510	Capacitor, Film, 0.0015μF±10%, 200V
C432	1	EA22802590	Capacitor, Electrolytic, 2200μF, 25V
C433	1	DK18503010	Capacitor, Ceramic, 0.05μF, 50V
C434	1	DK18503010	Capacitor, Ceramic, 0.05μF, 50V
C435	1	EA10702590	Capacitor, Electrolytic, 100μF, 25V
C437	1	EA47601690	Capacitor, Electrolytic, 47μF, 16V
C438	1	EA47601690	Capacitor, Electrolytic, 47μF, 16V
J401	1	YP06001060	Plug, 7-Pin
J402	1	YP06001060	Plug, 7-Pin
J403 ≀ J435	33	YP10001130	Plug
L401	1	LC22260010	Coil, Choke, 22mH
L402	1	LC22260010	Coil, Choke, 22mH
L403	1	LC12750020	Coil, Choke, 2.7mH
L404	1	LC14730010	Coil, Choke, 47μH
P400	1	YD41230040	P.W. Board (Power Amp)
	1	ZZ41230040	P.W. Board Assembly
Q401	1	HC10028050	IC, Power, TA7208P
Q402	1	HC10028050	IC, Power, TA7208P
Q403	1	HT404712B0	Transistor, 2SD471 L, K
R401	1	GD05333140	Resistor, Fixed, 33KΩ±5%, 1/4W
R402	1	GD05333140	Resistor, Fixed, 33KΩ±5%, 1/4W
R403	1	RA01040160	Resistor, Variable, 100KΩ
R404	1	RA01040160	Resistor, Variable, 100KΩ
R405	1	GD05153140	Resistor, Fixed, 15KΩ±5%, 1/4W
R406	1	GD05153140	Resistor, Fixed, 15KΩ±5%, 1/4W
R407	1	GD05333140	Resistor, Fixed, 33KΩ±5%, 1/4W
R408	1	RC10068120	Resistor, Fixed, 6.8Ω±10%, 1/2W
R409	1	GD05122140	Resistor, Fixed, 1.2KΩ±5%, 1/4W
R411	1	GD05221140	Resistor, Fixed, 220Ω±5%, 1/4W
R412	1	GD05221140	Resistor, Fixed, 220Ω±5%, 1/4W
R413	1	GD05333140	Resistor, Fixed, 33KΩ±5%, 1/4W
R414	1	GD05333140	Resistor, Fixed, 33KΩ±5%, 1/4W
R415	1	GJ05010110	Resistor, Fixed
T401	1	TC10150010	OSC Transformer
C501	1	DF65301010	Capacitor, Film, 300pF±5%, 50V
C502	1	DF65301010	Capacitor, Film, 300pF±5%, 50V
C505	1	EM10402510	Capacitor, Electrolytic, 0.1μF, 50V
C506	1	EM10402510	Capacitor, Electrolytic, 0.1μF, 50V
G501	1	IM11042330	Meter, DC
G502	1	IM11042330	Meter, DC
J501	1	YP06001050	Plug
J502	1	YP06001060	Plug
J503	1	YP06001070	Plug
J504 ≀ J508	5	YP10001130	Plug
P500	1	YD41230050	P.W. Board (Meter)
	1	ZZ41230050	P.W. Board Assembly

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
Q501	1	HT105642B0	Transistor, 2SA564(Q, R)
Q502	1	HT105642B0	Transistor, 2SA564 (Q, R)
R501	1	GD05683140	Resistor, Fixed, 68KΩ±5%, 1/4W
R502	1	GD05683140	Resistor, Fixed, 68KΩ±5%, 1/4W
R503	1	GD05100140	Resistor, Fixed, 10Ω±5%, 1/4W
R504	1	GD05681140	Resistor, Fixed, 680Ω±5%, 1/4W
R505	1	GD05223140	Resistor, Fixed, 22KΩ±5%, 1/4W
R506	1	RA05030060	Resistor, Trimmer, 50KΩ
R507	1	GD05123140	Resistor, Fixed, 12KΩ±5%, 1/4W
R508	1	GD05123140	Resistor, Fixed, 12KΩ±5%, 1/4W
R509	1	GD05433140	Resistor, Fixed, 43KΩ±5%, 1/4W
R510	1	GD05433140	Resistor, Fixed, 43KΩ±5%, 1/4W
R511	1	GD05104140	Resistor, Fixed, 100KΩ±5%, 1/4W
R512	1	GD05104140	Resistor, Fixed, 100KΩ±5%, 1/4W
R513	1	GD05562140	Resistor, Fixed, 5.6KΩ±5%, 1/4W
R514	1	GD05562140	Resistor, Fixed, 5.6KΩ±5%, 1/4W
R515	1	GD05332140	Resistor, Fixed, 3.3KΩ±5%, 1/4W
R516	1	GD05561140	Resistor, Fixed, 560Ω±5%, 1/4W
S501	1	SC06030010	Switch, Lever, Tape Selector
S502	1	SC04030030	Switch, Lever, Meter
S503	1	SC04030010	Switch, Lever Mode
C601	1	DF16472010	Capacitor, Film, 0.0047μF±10%,50V
C602	1	DF16472010	Capacitor, Film, 0.0047μF±10%,50V
C603	1	DF16683010	Capacitor, Film, 0.068μF±10%, 50V
C604	1	DF16683010	Capacitor, Film, 0.068μF±10%, 50V
C605	1	DF16333010	Capacitor, Film, 0.33μF±10%, 50V
C606	1	DF16333010	Capacitor, Film, 0.033μF±10%, 50V
C607	1	EM47402510	Capacitor, Electrolytic, 0.47μF,25V
C608	1	EM47402510	Capacitor, Electrolytic, 0.47μF,25V
C609	1	DF16102010	Capacitor, Film, 0.001μF±10%, 50V
C610	1	DF16102010	Capacitor, Film, 0.001μF±10%, 50V
C611	1	EM10402510	Capacitor, Electrolytic, 0.1μF, 25V
C612	1	EM10402510	Capacitor, Electrolytic, 0.1μF, 25V
J601	1	YP06001050	Plug
J602 ≀ J607	6	YP10001130	Plug
P600	1	YD41230060	P.W. Board (Tone Control)
	1	ZZ41830060	P.W. Board Assembly
R601	1	GD05332140	Resistor, Fixed, 3.3KΩ±5%, 1/4W
R602	1	GD05332140	Resistor, Fixed, 3.3KΩ±5%, 1/4W
R603	1	GD05153140	Resistor, Fixed, 15KΩ±5%, 1/4W
R604	1	GD05153140	Resistor, Fixed, 15KΩ±5%, 1/4W
R605	1	GD05102140	Resistor, Fixed, 1KΩ±5%, 1/4W
R606	1	GD05102140	Resistor, Fixed, 1KΩ±5%, 1/4W
R607	1	GD05102140	Resistor, Fixed, 1KΩ±5%, 1/4W
R608	1	GD05102140	Resistor, Fixed, 1KΩ±5%, 1/4W
R609	1	GD05102140	Resistor, Fixed, 1KΩ±5%, 1/4W
R610	1	GD05102140	Resistor, Fixed, 1KΩ±5%, 1/4W
R611	1	GD05332140	Resistor, Fixed, 3.3KΩ±5%, 1/4W
R612	1	GD05332140	Resistor, Fixed, 3.3KΩ±5%, 1/4W
R613	1	RM05030660	Resistor, Variable, 50KΩ
R614	1	RM05030660	Resistor, Variable, 50KΩ
R615	1	RM05030180	Resistor, Variable, 50KΩ
R616	1	RM05030650	Resistor, Variable, 50KΩ
C701	1	DK18103010	Capacitor, Ceramic, 0.01μF+80, -20%, 50V
C702	1	DK18103010	Capacitor, Ceramic, 0.01μF+80, -20%, 50V

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
C703	1	DK18103010	Capacitor, Ceramic, 0.01μF+80, -20%, 50V
C704	1	DK18103010	Capacitor, Ceramic, 0.01μF+80, -20%, 50V
C705	1	EA22802590	Capacitor, Electrolytic, 2200μF, 25V
C706	1	EA22802590	Capacitor, Electrolytic, 2200μF, 25V
J701 ≀ J711	11	YP10001130	Plug
J712	1	YJ08000200	Jack, Fuse Clip
J713	1	YJ08000200	Jack, Fuse Clip
P700	1	YD41230070	P.W. Board Power Supply
	1	ZZ41230070	Power Supply Assembly
Q701	1	HD20006100	Diode, Red, 10DC05
Q702	1	HD20007100	Diode, Black, 10DC05
Q703	1	HD20013100	Diode, 10DI, 100V, 1A
R701	1	GJ05820010	Resistor, Fixed, 82Ω±5%, 1W
R702	1	GJ05820010	Resistor, Fixed, 82Ω±5%, 1W
C801	1	EA10601690	Capacitor, Electrolytic, 10μF, 16V
C802	1	EA10601690	Capacitor, Electrolytic, 10μF, 16V
C803	1	EA10505090	Capacitor, Electrolytic, 1μF, 50V
C804	1	EA10505090	Capacitor, Electrolytic, 1μF, 50V
C805	1	EM10402510	Capacitor, Electrolytic, 0.1μF, 25V
C806	1	EM10402510	Capacitor, Electrolytic, 0.1μF, 25V
C807	1	EA10801690	Capacitor, Electrolytic, 1000μF, 16V
J801 ≀ J807	7	YP10001130	Plug
P800	1	YD41230080	P.W. Board (Phono Equalizer)
	1	ZZ41230080	P.W. Board Assembly
Q801	1	HT313271T0	Transistor, 2SC1327 T
Q802	1	HT313271T0	Transistor, 2SC1327 T
R801	1	GD05472140	Resistor, Fixed, 4.7KΩ±5%, 1/4W
R802	1	GD05472140	Resistor, Fixed, 4.7KΩ±5%, 1/4W
R803	1	GD05104140	Resistor, Fixed, 100KΩ±5%, 1/4W
R804	1	GD05104140	Resistor, Fixed, 100KΩ±5%, 1/4W
R805	1	GD05472140	Resistor, Fixed, 4.7KΩ±5%, 1/4W
R806	1	GD05472140	Resistor, Fixed, 4.7KΩ±5%, 1/4W
R807	1	GD05121140	Resistor, Fixed, 120Ω±5%, 1/4W
R808	1	GD05121140	Resistor, Fixed, 120Ω±5%, 1/4W
R809	1	GD05183140	Resistor, Fixed, 18KΩ±5%, 1/4W
R810	1	GD05183140	Resistor, Fixed, 18KΩ±5%, 1/4W
R811	1	GD05182140	Resistor, Fixed, 1.8KΩ±5%, 1/4W
R812	1	GD05182140	Resistor, Fixed, 1.8KΩ±5%, 1/4W
C901	1	EE22701650	Capacitor, Electrolytic, 220μF±20%, 16V
C902	1	DK18103010	Capacitor, Ceramic, 0.01μ+80, -20%, 50V
C903	1	EA10601690	Capacitor, Electrolytic, 10μF, 16V
C904	1	DK18403010	Capacitor, Ceramic, 0.04μF+80,-20%, 50V
J901 ≀ J906	6	YP10001130	Plug
L901	1	LY20060040	Relay, 6V

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
P900	1	YF41230090	P.W. Board Noise Blanket
	1	ZZ41230090	P.W. Board Assembly
Q901	1	HT107331P0	Transistor, 2SA733 P
Q902	1	HT309451P0	Transistor, 2SC945 P
Q903	1	HT313171P0	Transistor, 2SC1317 P
Q904	1	HD20013100	Diode,
Q905	1	HD20013100	Diode,
Q906	1	HD30023090	Zener,
R901	1	RC10222120	Resistor, Fixed, 2.2KΩ±10%, 1/2W
R902	1	RC10222120	Resistor, Fixed, 2.2KΩ±10%, 1/2W
R903	1	RC10039120	Resistor, Fixed, 3.9Ω±10%, 1/2W
R904	1	RC10039120	Resistor, Fixed, 3.9Ω±10%, 1/2W
R905	1	GD05102140	Resistor, Fixed, 1KΩ±5%, 1/4W
R906	1	GD05822140	Resistor, Fixed, 8.2KΩ±5%, 1/4W
R907	1	GD05123140	Resistor, Fixed, 12KΩ±5%, 1/4W
R908	1	GD05472140	Resistor, Fixed, 4.7KΩ±5%, 1/4W
R909	1	GD05103140	Resistor, Fixed, 10KΩ±5%, 1/4W
R910	1	GD05222140	Resistor, Fixed, 2.2KΩ±5%, 1/4W
001U	2	4182805010	Master carton
002U	1	4182801010	Packing case
003U	1	4123809010	Cushion
004U	1	4123809020	Cushion
005U	1	9015350180	Polyethylene Bag
006U	1	9011020010	Polyethylene Bag
008U	2	9522815010	Serinal No. card
009U	1	9011825010	Polyethylene Bag
913T	1	4182851310	Instructions
914T	1	3906854023	Guarantee Card
915T	1	2876851030	Instructions
916T	1	9630000170	Guarantee Card
ZB01	8	ZB02010070	Battery
AJ01	1	YP01000250	Plug
AY01	2	ZC01805010	Power Cord, AC